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ABSTRACTS

FIBERS A

MECHANICAL PROPERTIES OF TEXTILE MATERIALS. E. J. Stavrakas. Mech. Eng. 82: 58-62 (Mar. 1960). (1293)

One-time load to rupture, three components of deformation, repeated stress, abrasion resistance, repeated strain, pulse propagation, a pulse propagation meter, and recovery from deformation are discussed. Graphs, 17 refs.

Natural fibers A1

THEORY OF FIBER SEPARATION BY MEANS OF SAW-TOOTHED SEPARATORS. B. I. Roganov. Tekhnol. Tekstil. Prom. No. 4 (11): 54-62 (1959). In Russian. Through BCIRA 40: 268 (1960). (1294)

The mechanism of the cotton gin, consisting of a working chamber and saw-toothed discs, is described. The dents of the saws moving in the working chamber cause the steel roller to rotate, gripping and separating the fibers from the seeds, combing them, and transporting them to the pneumatic stripping device. Optimum conditions for the operation of the machine are established.

BALING COTTON AT GINS: PRACTICES AND COSTS, FLAT, STANDARD, HIGH DENSITY BALES. J. D. Campbell and R. C. Soxman. U.S. Agri. Mktg. Serv., Washington 25, D. C. Mar. 1960. 48 p. Mktg. research report 386. Order from Superintendent of Documents, Washington 25, D. C. 35¢. (1295)

Aim of the study reported on in this publication was to evaluate the new gin bale presses for the cotton industry on the basis of costs and problems and practices their use may bring, and to investigate attitudes of manufacturers on density and types of bales.

WHAT YOU CAN EXPECT FROM 1959 COTTON. F. L. Gerdes. Textile World 110: 49-51 (Mar. 1960). (1296)

USDA fiber and spinning tests, based on early-season pickings and compared with the 1958 crop, show that quality was generally good, ginning practices are improving, and the best cotton was produced in the Far West. Graphs.

A SEARCH FOR NEW FIBER CROPS. H. J. Nieschlag, G. H. Nelson, I. A. Wolff, and R. E. Perdue, Jr. Tappi 43: 193-201 (Mar. 1960). (1297)

A scheme has been devised for evaluation of potential fiber plants as new sources of paper pulp. This evaluation procedure involves consideration of botanical characteristics, chemical composition, yield and dimensional measurements of fibrous constituents, and a qualitative physical and visual appraisal of the plant. 33 refs.

CROSS-SECTION CHARACTERISTICS OF DEAD WOOL FIBERS. E. Szucht. Prace Inst. Wlok. 9, No. 1(90): 55-65 (1959). In Polish. Through BCIRA 40: 578 (1960). (1298)

It is shown that, depending upon the nature and type of wool, the cross-section of dead fibers has a different shape, whereby the fiber fills not more than 50% of the circle described on it. The wall thickness varies correspondingly between 5 and 10 μ at a maximum fiber diameter of 120-180 μ. The fiber nucleus in highly flattened fibers is in some cases completely invisible; in others, it is very loosely connected with the fiber walls and damage to the latter causes partial or complete detachment of the nucleus. Photomicrographs are given.

MECHANICAL PROPERTIES OF WOOL KERATIN AND ITS MOLECULAR CONFIGURATION. M. Feughelman and A. R. Haly. Kolloid Z. 168: 107-115 (Feb. 1960). (1299)

The relationship between the amount of supercontraction at the end of the first and final stages of a wool fiber in concentrated lithium bromide, and the mechanical properties of the fiber at these stages in the lithium bromide solution can be explained in terms of a simple structural model. This model requires two types of zones of different thermal stability along the microfibrils in the wool keratin. One of these zones representing about 36% of the microfibril unfolds unimpeded by bulky side chains, and the remaining 64% may be unfolded by overcoming steric hindrance and causing irreversible breakdown of bonds. This zone model can be used to explain the load-extension behavior of single wool fibers. Further it may be applied to other mechanical behavior such as creep in the yield and post-yield regions and also the second order transition temperature that has been observed in stretched wool fibers in water. Diagrs, graphs, tables, 25 refs.

Manmade fibers A2

SHIPPING INFORMATION: ACRILAN ACRYLIC STAPLE AND TOW. Chemstrand Corp., Decatur, Ala. Mar. 1960. 10 p. Bull. AP 12-1. (1300)

MANMADE FIBER DEVELOPMENTS DURING 1959. Textile Weekly 59 (2): 1420, 1425-1426 (Dec. 18, 1959). (1301)

PROPERTIES OF TYPE 700 DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1960. 7 p. Bull. N-123. Free. (1302)

Typical properties as well as the effects of moisture, heat, light, and chemicals on Type 700 nylon are presented.

ON THE THERMAL RESISTANCE PROPERTIES OF POLYESTER FIBERS. PART 1. THERMAL RESISTANCE PROPERTIES OF TERYLENE FILAMENT YARN. PARTS 2 AND 3. THERMAL RESISTANCE PROPERTIES OF TERYLENE CLOTH. (1) AND (2). K. Hosoda and S. Tsuchibayashi. Bull. Textile Research Inst. (Japan) No. 50: 15-36 (1959). In Japanese (English summary). Through BCIRA 40: 415 (1960). (1303)

The effects of dry and wet heat treatment on shrinkage, tensile strength and elongation, elastic recovery fatigue resistance, and bending rigidity are discussed.

ADVENT OF SYNTHETIC FIBERS. J. W. S. Hearle. Textile Mfr. 86: 54-57 (Feb. 1960). (1304)

The history of the discovery and development of the vinyl, acrylic, polyamide, and polyester fibers is briefly outlined.

POLYPROPYLENE FIBER. G. Natta. Tinctoria 56, No. 11: 473-478 (1959). In Italian. Through BCIRA 40: 711 (1960). (1305)

Isotactic polypropylene, consisting of linear macromolecules with exceptionally high regularity of the steric structure, is suitable for the production of textile fibers having a high crystallinity and tenacity. The elastic properties of this fiber depend upon the steric purity of the polymer and can be varied, as desired, within fairly wide limits. Owing to the low density (0.90-0.92) (lower than that of all other known artificial and synthetic fibers), the low cost of the monomer, and the simplicity of the spinning process, the polypropylene fibers are expected to find wide application in the textile industry.

MECHANICAL PROPERTIES OF TERYLENE FIBERS UNDER VARIOUS TEMPERATURES AND HUMIDITIES. S. Yamaguchi (Kogakuin Univ.). J. Textile Machy. Soc. Japan 5: 14-20 (Dec. 1959). (1306)

An investigation of the mechanical properties of Terylene fibers as single filaments under various temperatures, 10-60° C, and humidities, 32-90% rh. These properties are compared with the properties of 8 other fibers previously reported (see abstr. 405/58). Graphs, tables, 3 refs.

MICROSCOPIC SWELLING STUDIES ON MECHANICALLY STRESSED POLYAMIDE FIBERS. W. Bobeth and G. Piechottka. Faserforsch. u. Textiltech. 10, No. 10: 464-472 (1959). In German. Through BCIRA 40: 577 (1960). (1307)

Single polyamide filaments in raw and set state were subjected under varying conditions to the usual physical tests, and their swelling behavior was examined microscopically to ascertain the extent to which gradually increasing twisting, stretching, abrading, bending, and crushing stresses reduce the time of the swelling reaction. The method may be applicable to morphological fiber studies and, in certain cases, to the control of manufacturing conditions.

ALON: NEW HIGH TENACITY ACETYLATED CELLULOSIC FIBER. J. B. Goldberg. Can. Textile J. 77: 59-62 (Mar. 4, 1960). (1308)

The development of Alon and of fibrous acetylation procedures, Alon characteristics and processing, and its future outlook are discussed.

PROGRESS IN THE PRODUCTION AND USES OF MANMADE FIBERS. B. C. M. Dorset. Textile Mfr. 86: 31-36 (Jan. 1960). (1309)

Among the developments discussed are: Japanese polyester fiber with high tensile strength and melting point (BP 813 239); cyanoethylation with gamma radiation; use of cyanoethyl starch ethers to improve acrylic fiber dyeability (BP 813 013); ethylene-maleic interpolymer sizes for nylon (BP 815 830); epoxy compounds for reducing viscose rayon water imbibation (BP 817 294); improving heat and alkali stability of acrylic fibers basified for improved dyeing (BP 813 815); heat treatment for improving hand of crimped yarns (BP 815 176); and performance of Svetema pad-roll dyeing plant.

SYNTHETIC FIBERS IN ITALY: RECENT DEVELOPMENTS. G. Coppa-Zuccari. Fibres and Plastics 21: 85-86 (Mar. 1960). (1310)

The characteristics and applications of Territal polyester fiber (Soc. Rhodiatoce), Rhodia acetate flock (Soc. Rhodiatoce), Lilion viscose fiber (Snia Viscosa), and Delfion polyamide fiber (Bombrini Parodi-Delfino) are described. Photo, diagr.

DETAILS ON LYCRA SPANDEX FIBER. E. I. du Pont de Nemours & Co. Textile World 110: 54-55 (Mar. 1960). (1311)

The chemical resistance and physical properties of Lycra (formerly Fiber K) are tabulated. Tables.

CHEMICAL RESISTANCE OF POLYESTER FIBERS. K. Hosoda and S. Tsuchibayashi. Bull. Textile Research Inst. (Japan) No. 50: 37-42 (1959). In Japanese (English summary). Through BCIRA 40: 397 (1960). (1312)

Treatment of Terylene fabrics in 3% solutions of caustic soda, hydrochloric acid, and sulfuric acid, without tension, was studied, and the effects on physical properties, compared with nylon fabrics, are discussed.

YARN PRODUCTION B

EVER EVEN. Daiwa Spinning Co. Ltd. J. Textile Machy. Soc. Japan 5: 63-64 (Dec. 1959). (1313)

A drafting machine equipped with Ever Even automatically adjusts the draft ratio to the thickness of fed slivers, and makes the thickness of produced slivers uniform. Features are described and illustrated. Comparative data are given on sliver variation using the Ever Even and using two other draft control mechanisms. Photo, diagr, graphs, table.

PRACTICAL HINTS ON COLORING AND FINISHING LINSEY GOODS. Textile Merc. 141: 847-849 (Dec. 25, 1959). (1314)

The sources of the waste fibers used in linsey goods production, their recovery, decolorizing, lubrication, scouring, sizing, and block printing are described.

MODERN TRENDS IN SPINNING. W. Nutter (T. M. M. (Research) Ltd). Textile Weekly 59 (2): 1271-1277 (Dec. 4, 1959); 1347-1350 (Dec. 11, 1959). (1315)

Recent developments at all stages of processing in the production of combed cotton yarn are reviewed.

EFFECTS OF DRAFTING ON FIBER ORIENTATION. K. Fujino and W. Itani (Kyoto Univ.). J. Textile Machy. Soc. Japan 5: 1-9 (Dec. 1959). (1316)

This article concerns a theoretical analysis of the effects of drafting on the fiber orientation of ideal slivers. The assumptions made are that ideal slivers are filled perfectly with the medium; that all fibers can be folded at the interlocking points of segments; and that the directional distributions of segments are fixed by the deformation of the medium. The authors have formulated a function to express the effects which changes in the length and volume of ideal slivers have on fiber orientation. The results of this analysis explain some empirical facts, such as: (1) The directional distribution of segments in slivers follows the normal or the peaked distribution, depending on whether draft ratios are small or large. (2) The degree of fiber orientation of slivers increases gradually, but the rate of increase gets gradually smaller as the draft ratio increases. Graphs, tables, 1 ref.

NEW CONSTRUCTION OF FLUTED DRAFTING ROLLERS. A. G. Feldman. Tekstil. Prom. 19, No. 10: 42-44 (1959). In Russian. Through BCIRA 40: 288 (1960). (1317)

Since analysis has shown that the present fluted rollers do not satisfy the requirements, a new construction has been developed which eliminates to a great extent rocking of the individual links of the fluted rollers. This is claimed to result in an improved yarn regularity, higher output, and reduction of yarn breakages.

EFFECTS OF THE THREE ROLLER SPINNING METHOD AND THE SLIVER SPINNING METHOD ON THE IRREGULARITY OF COTTON YARNS AND FABRICS. W. Wegener and H. Peuker. Z. ges. Textil-Ind. 61, No. 23: 962-972; No. 24: 996-1004 (1959). In German. Through BCIRA 40: 494 (1960). (1318)

The abridged sliver-to-yarn spinning process is compared with 3-roller spinning and the length-dependent irregularity of the yarns (Nm 34) spun by both methods and the irregularity of fabrics (appearance) produced from them are examined. A photoelectric method and apparatus for measuring yarn thickness variations are described, the strength and elongation of the two yarns are compared, and the effect of various card clothings on the yarn quality (length variations and fabric appearance, dynamometric properties, imperfections) is investigated. 28 refs.

MIXED SPINNING OF SYNTHETIC FIBER NYLON AND ACETATE FIBER. B. Sato, J. Horii, R. Miyashita, Y. Suwabe, and T. Tada. Bull. Textile Research Inst. (Japan) No. 50: 49-68 (1959). In Japanese (English summary). Through BCIRA 40: 300 (1960). (1319)

The spinning of mixed staple fibers was studied: the process is easily operated with 30% acetate staple, which tends to be distributed on the surface of the yarns.

CONTROL IN AND RECOMMENDATIONS FOR PROCESSING SYNTHETIC FIBERS. P. Muller. Industrie Textile: 765-770 (Nov. 1959). In French. Through BCIRA 40: 491 (1960). (1320)

Some detailed information is given concerning the control of the Pacific Converter which, when used for tow-to-top processing of synthetic fibers, does not give satisfactory results when the least detail is neglected.

SPINNING WASTE CONTROL. Textile World 110: 63 (Mar. 1960). (1321)

A survey of 4 large cotton mills shows that reworkable waste can be controlled in the spinning room by checking spinners' waste cans, posting individual waste reports, and explaining waste control to operators.

ADVANCES IN COTTON SPINNING TECHNIQUE. W. Nutter. Textile Recorder 77: 71-72 (Mar. 1960). (1322)

The progress which has been made in cotton spinning processes during the last few years is outlined. In particular, a comparison is made between the latest processing sequences in 1950 and 1960. Table.

YARN PRODUCTION FROM A MIXTURE OF COTTON AND VISCOSE RAYON STAPLE FIBER. A. N. Vanchikov. Tekstil. Prom. 19, No. 9: 23-28 (1959). In Russian. Through BCIRA 40: 299 (1960). (1323)

Results of experiments made by mixing various amounts of cotton and rayon staple fiber and processing of the blends on sliver lap machines or mixer-feeders are described and the physico-mechanical properties of the yarn evaluated. The yarn processed on mixer-feeders has proved to be of higher quality. Test results obtained on yarn with different counts produced from cotton/viscose staple fiber and processing of the blends on sliver lap machines or mixer-feeders use, and properties of the finished fabrics are given in tables.

Opening, picking, fiber preparation B1

QUALITATIVE AND QUANTITATIVE CHARACTERISTICS OF PICKER WASTE. V. G. Trifonov. Tekhnol. Tekstil. Prom. No. 5 (12): 47-53 (1959). In Russian. Through BCIRA 40: 726 (1960). (1324)

The quantitative data obtained in this study confirm that one of the main reasons for a high fiber loss during picking is the excessively high damaging action of each individual beater due to constructional faults in the picking. The quantity of chaff and fiber waste is particularly high at the start of the picking process. Some remedies are suggested.

RATIONAL MIXING OF COTTONS BY THE AUTOMATIC FIBER METER SYSTEM. Industrie Textile: 757-760 (Nov. 1959). In French. Through BCIRA 40: 488 (1960). (1325)

This automatic weighing and feeding system weighs the fibers in ounces directly from the bales, the production of each Fiber Meter reaching thereby up to 225 kg/hr. One Fiber Meter line can feed up to 4 pickers. The mechanism and components of a complete Fiber Meter installation are described.

COTTON OPENING AND REGULARITY. T. W. Walker. Textile Weekly 59 (2): 1140-1142 (Nov. 20, 1959). (1326)

The object of this article is to describe a method of using the hopper opener type combination for the purpose of counteracting irregularity caused by operative inefficiency, and is an attempt to show how lap variation in the opening room caused by poor feeding at the bale opener was reduced. The combination of openers at which alterations were made consisted of the hopper bale breaker, hopper opener, and hopper feeder. Diagrs.

EFFECT OF LAP PREPARATION ON COMBER NOIL, YARN PROPERTIES. J. F. Bogdan, H. K. C. Woo, and C. H. Pan (Textile Research Center, N. C. State Coll.). Textile Inds. 124: 98-102 (Mar. 1960). (1327)

The results of 72 experiments on the effect of varying lap preparation, lap weight, and feed at the comber on cotton noil removal and yarn strength are reported. The data can assist mills in evaluating their combing-preparation systems in the light of the desired effect in terms of noil, yarn strength, or a combination of the two. Tables.

TECHNICAL PROGRESS IN THE CONSTRUCTION OF COTTON CLEANING AND PICKING MACHINERY. S. Dutkowski. Przeglad Wlok. 13, No. 9: 473-481 (1959). In Polish. Through BCIRA 40: 487 (1960). (1328)

New constructions of blowroom machinery are described and illustrated, reference being made to Soviet, German, British, Swiss, French, and American developments.

METHODS OF MIXING RAW MATERIALS. I. K. Slutskov. Tekhnol. Tekstil. Prom. No. 5(12): 71-77 (1959). In Russian. Through BCIRA 40: 724 (1960). (1329)

The best method of mixing short fibers is shown to be layer mixing in the mixer with subsequent mixing on the card, while longer fibers can be advantageously mixed on the spreader. When mixing at the sliver stage, the components must be mixed during all processing stages, feeding from 2-3 batches of the carded sliver during each passage. The distribution of the components in the delivered sliver depends upon their distribution in the machine fed, the position of the sliver (top, bottom) if two slivers are fed, the method of feeding the draw-frame sliver to the sliver lap machine (on or under the plate), and the position of the delivered sliver (right or left side).

COTTON OPENING: TRUTZSCHLER BLOWROOM EQUIPMENT. O. Glaessner. Textile Weekly 59 (2): 1437-1439 (Dec. 18, 1959). (1330)

Features of the Trützschler blending bale opener, waste opener feeder, automatic bale plucking machine, step cleaner, cylinder opener, multiple opener MO, and hopper feeder are described. Photo, diagr.

Carding and combing B2

NEW COMBING MACHINE G-4. P. S. Malevski-Malevich and A. L. Yudovich. Tekstil. Prom. 19, No. 10: 33-39 (1959). In Russian. Through BCIRA 40: 287 (1960). (1331)

The new machine is illustrated and its mechanism described. Technological tests on the machine have been carried out with two cotton varieties, the staple lengths 31/32 and 43/44 mm respectively, and compared with those made on the Saco-Lowell machine.

ADVANTAGES OF THE IMPROVED LAP FEED ON CARDING MACHINES. Zuppinger & Oelhafen SG. Melliand 41, No. 1: 9, 11 (1960). (1332)

To achieve a more uniform gripping effect, rings of a special fillet are mounted at 1 in. intervals on the feed roll and corresponding grooves are cut into the flat feed table. Diagr.

ON THE MODEL D CARDING ENGINE. K. Aoki, T. Asakawa, and N. Arita (Daiwa Spinning Co. Ltd). J. Textile Machy. Soc. Japan 5: 57-62 (Dec. 1959). (1333)

As the first step toward producing a flatless high production card of simple mechanism, the authors explored the possibility of improving the cleaning efficiency of the lickerin. A carding engine of higher cleaning efficiency was developed. One of its major features is that it has two lickerins, the second lickerin being located between the conventional lickerin and the cylinder. The second lickerin adjoins both the first lickerin and the cylinder. The results of spinning tests on 20s and 40s cotton yarns and on 10s cotton yarn produced from waste are given. Diagrs, tables, 1 ref.

FIBER MOTION ON A CARD. R. T. D. Richards and P. D. Jowett (Wool Inds. Research Assoc.). Textile Mfr. 86: 12 (Jan. 1960). (1334)

Since the doffer and workers do not take up all the fibers presented to them by the swift, the fiber loadings on the rollers and the average time spent by a fiber in one part (the delay factor) are examined and correlated with the carding power of the machine. Graphs, 4 refs.

STUDY OF THE PERFORMANCE OF FLATS WITH ALL-METAL SAW-TOOTHED CLOTHING. I. M. Khatenever. Tekhnol. Tekstil. Prom. No. 5 (12): 78-81 (1959). In Russian. Through BCIRA 40: 728 (1960). (1335)

It is shown that the use of all-metal clothing on card flats makes it possible to increase the sliver yield by reducing the quantity of flat strips by 1.6%. The quality of the card slivers and their regularity per meter length are not impaired. The clothing is particularly effective in processing viscose staple fiber.

METAL CLOTHING IN COTTON CARDING. B. Schäffer. Melliand Textilber. 40, No. 12: 1370-1372 (1959). In German. Through BCIRA 40: 490 (1960). (1336)

Results from experiments are reported, which were carried out in the Hungarian Textile Research Institute to ascertain characteristic differences between flexible and all-metal card clothing. The latter gave, in all respects (number of neps, count variations, sliver cross-section irregularity, number of end-breaks, tensile strength of yarn, etc.), better results.

MODERNIZATION OF CARDING MACHINE. N. C. Basu. Indian Textile J. 70: 150-152 (Dec. 1959). (1337)

Modern carding improvements are considered. 6 refs.

Drawing and roving B3

OMM-II TYPE AUTO EVENER. Osaka Mach. Mfg. Co. Ltd. J. Textile Machy. Soc. Japan 5: 65-67 (Dec. 1959). (1338)

OMM-II type auto-evener is a machine for second or third drawing of the long staple spinning of wool, synthetic fibers, flax, and their blends. Features are described and specifications given. Diagrs.

SINGLE ZONE DRAFTING AT THE SPEED FRAME. W. Nutter (T. M. M. (Research) Ltd). Indian Textile J. 70: 205-208, 215 (Jan. 1960). (1339)

FEATURES OF SUNDERLAND LOOSE BOSS ROLLER OILER. Textile Mfr. 86: 25 (Jan. 1960). (1340)

The new mechanical oiler enables operatives to keep their hands and fingers free of oil and, at the same time, reduces roller shell handling to a minimum. Photos.

WINDING SLIVER PACKAGES. P. I. Aristov and B. M. Lyakishchev. Tekstil. Prom. 19, No. 9: 28-31 (1959). In Russian. Through BCIRA 40: 292 (1960). (1341)

A new device for winding the sliver is illustrated, and its mechanism described. It can be installed on any sliver lap machine. Examination of the intermediate products and of the yarn produced showed no impairment of the quality.

EQUATIONS FOR THE ATTENUATION CURVE OBTAINED DURING DRAFTING OF PRODUCTS WITH NONUNIFORM STRUCTURE. A. G. Sevost'yanov. Tekhnol. Tekstil. Prom. No. 4(11): 63-70 (1959). In Russian. Through BCIRA 40: 291 (1960). (1342)

Twenty-four equations are given for calculating, in the individual drafting zones, the number of fibers in any cross-section of a sliver with irregular structure.

REGULATING SYSTEMS FOR THE EQUALIZATION OF SLIVERS. PART 11. INVESTIGATIONS ON THE EQUALIZATION OF SLIVERS. W. Wegener and H. Bechlenberg. Textil-Praxis 14, No. 11: 1107-1114 (1959). In German. Through BCIRA 40: 289 (1959). (1343)

Results obtained in previous experiments carried out by means of control and regulating devices are summarized, and numerous diagrams are presented to show the effects of sliver equalization by using the mechanical thickness measuring method and the method of measuring the drafting force for controlling sliver variations.

VERSATILE DRAFTING SYSTEM. Casablancas High Draft Co. Ltd. Can. Textile J. 77: 49-50 (Feb. 19, 1960). (1344)

The drafting arrangement described (BP 787 087) is designed to be readily adjusted in a simple and expeditious manner for the efficient alternative drafting of long or short fibers. Diagrs.

O-M SUPER DRAFTER. O-M Spinning Mach. Mfg. Co. Ltd. J. Textile Machy. Soc. Japan 5: 65 (Dec. 1959). (1345)

O-M Super Drafter is a high-speed drawing frame for cotton and synthetic fibers. It serves as a finishing drawing frame prior to super high-draft spinning. Features are described and specifications given.

Spinning, winding, twisting B4

NEW TYPE PNEUMAFIL SYSTEM. Carrier Eng. Co. Ltd. Textile Weekly 60 (1): 240, 242 (Jan. 29, 1960). Textile Merc. 142: 140b-141 (Jan. 29, 1960). (1346)

Features of the new system include: flattish design of phosphor-bronze, waste-collecting screen to minimize the effect of rat-tailing in the collecting units; and a downward air discharge from the units which, when applied to the modern high-powered ring frames, assists in the dissipation of the frame drive motor heat. Photos.

WORSTED SPINNING AND TWISTING: AIDS TO MORE EFFICIENT PRODUCTION. Wool Record 97: 307-308 (Feb. 5, 1960). (1347)

BRUNT VARIABLE-SPEED MOTOR FOR RING SPINNING FRAMES. Brunt Variable Speed Motors Ltd. Textile Merc. 142: 244-245, 256 (Feb. 19, 1960). (1348)

Among the claims made for the motor are: immediate reversing without switching or changing connections; continuously variable speed from 0-6,000 rpm; full control by one handwheel or lever; perfect commutation; higher efficiency than by any other system; no mechanical transmission losses; and immediate adaptability to 1-, 2-, or 3-phase operation. Diagr, graphs.

MITSUBISHI POT TYPE AIR SPINNING FRAME (FOR WORSTED YARN). Mitsubishi Shipbuilding & Eng. Co. Ltd and Hiroshima Precision Mach. Works. J. Textile Machy. Soc. Japan 5: 67-69 (Dec. 1959). (1349)

Mitsubishi pot type air spinning frame (ASF for short) is a new spinning frame incorporating super high drafting equipment and pot winding equipment. It can be run by fewer operatives than the ordinary ring spinning frame. Features are described, and spinning data and specifications given. Diagrs.

DUAL MOTOR DRIVES ON RING FRAMES. F. W. Cox. Textile Weekly 59 (2): 1223-1224, 1227 (Nov. 27, 1959); 1279-1285 (Dec. 4, 1959). (1350)

Part 1. Yarn tensions; end-breakages; development of motor drive. Part 2. Early forms of 2-speed drive; development of dual motor drive; slow-start controller; results in practice. Photos, diagrs, graphs, table.

ALD RING SPINNING FRAME. Ishikawa Seisakusho Ltd. J. Textile Machy. Soc. Japan 5: 69-72 (Dec. 1959). (1351)

ALD ring spinning frame features a new draft control mechanism, the ALD (Abbott Line Draft) system. The ALD system uses no apron. It controls draft by means of a 4-slide piece assembly. Features of the frame are described and illustrated. Diagrs.

SPINNING ON BARE SPINDLES. E. D. Mizonov. Tekhnol. Tekstil. Prom. No. 4(11): 75-85 (1959). In Russian. Through BCIRA 40: 296 (1960). (1352)

After a brief study of the forces driving the traveler, the author describes experiments in which a conical lightweight paper or plastic disc (the diameter of which should be greater than the diameter of the ring and correspond to the balloon diameter on a level with the cop nose) was mounted on the spindle. This disc is claimed to eliminate end breakages. The mounting on the spindle of a square or triangular plastic socket with very thin walls so as to ensure firmness of the cop is also recommended.

ADJUSTMENT AND USE OF THE AUTOMATIC THREAD TENSION REGULATOR ON SPINNING MACHINES. B. V. Grinberg. Tekstil. Prom. 19, No. 11: 31-35 (1959). In Russian. Through BCIRA 40: 735 (1960). (1353)

It was found that by using this device the thread breakage is reduced by 20% and more. The device is illustrated and the experimental results are tabulated.

IMPROVED PNEUMAFIL RING FRAME SUCTION UNDERCLEARER. Carrier Eng. Co. Ltd. Textile Recorder 77: 95 (Mar. 1960). (1354)

The redesigned underclearer incorporates new suction tubes, an improved impeller, and new support brackets. Photos.

HIGH LIFT SPINDLES FOR LARGE PACKAGES. Y. I. Korityssk i, V. S. Kuznetsov, I. V. Kornev, and N. N. Lebedeva. Tekstil. Prom. 19, No. 9: 32-35 (1959). In Russian. Through BCIRA 40: 294 (1960). (1355)

The new spindles described can be used on cotton spinning machines for winding packages with a height of up to 250 mm, instead of 180 mm, at the usual speed of 12,000-13,000 rev/min. The increased ring-rail lift from 180-230 mm at the same ring diameter makes it possible to increase the productivity and the package size by about 20-25%.

HYDRODYNAMICS OF SPINDLES. V. M. Cherkasskii. Tekhnol. Tekstil. Prom. No. 5 (12): 125-130 (1959). In Russian. Through BCIRA 40: 734 (1960). (1356)

The problem of considerable losses of energy and high quality lubricants, associated with the use of spindles on textile machinery, is discussed, with special reference to the power consumed for maintaining a certain hydrodynamic state in the lubricating oil surrounding the lower end of the spindle. This so-called hydraulic power is determined mainly by the kinetics of the oil-flow around the spindle shaft, the dimensions of the immersed portion and the number of its revolutions, as well as the viscosity of the lubricating oil.

FANCY YARNS AND PRINCIPLES OF FANCY TWISTING. PART 2. MAIN REQUIREMENTS FOR THE FORMATION OF INDIVIDUAL EFFECTS. J. Ecker. Textil-Praxis 14, No. 11: 1129-1133 (1959). In German. Through BCIRA 40: 303 (1960). (1357)

Possibilities of producing various fancy thread effects, such as light and heavy spiral, terry, chenille, flame, loop, and roving effects, are discussed.

LOOM AND RING TRAVELER LUBRICANTS REMOVABLE BY WASHING. PART 3. M. Kehren and H. Hendrix. Melliand Textilber. 40, No. 12: 1430-1432 (1959). In German. Through BCIRA 40: 599 (1960). (1358)

The authors discuss the chemical nature of ring traveler lubricants which, unlike the loom oils removable by washing, consist of pure mineral oils of a vaseline consistency without the addition of other substances, so that stains and splashes of these lubricants on yarns and fabrics resist removal during washing. The manufacturers are, therefore, advised to improve the washability of their product by the addition of suitable emulsifiers or other solubilizing substances.

Yarns B5

CREPE YARNS: THEIR DIAMETERS AND STRUCTURES. I. Gemma, Y. Fukushima, and T. Miyasaka. J. Textile Machy. Soc. Japan 5: 42-49 (Dec. 1959). (1359)

The purpose of this study is to clarify those properties of twisted yarns which are necessary for obtaining pebbles in crepe fabrics. Chapter 1 deals with the diameters of twisted filament yarns. Chapter 2 discusses the structures of twisted filament yarn. Graphs, tables, 6 refs.

NEW MATERIALS FOR TIRE CORD. C. A. Litzler (C. A. Litzler Co.). Modern Textiles Mag. 41: 24, 36-38, 46, 56 (Mar. 1960). (1360)

In this survey the advantages and disadvantages of Caprolan nylon, polyester fibers, wire, glass fibers, polyurethane, polypropylene, vinylidene chloride, and Urylon for tire cord use are discussed. Graphs.

RECENT ADVANCES IN HIGH TENACITY RAYONS. E. V. Reeves (Courtaulds Ltd). Textile Mfr. 86: 62-64, 78 (Feb. 1960). (1361)

Advances in the continuous spinning and manufacture of viscose, as well as tire cord cabling, cord strength improvement, and methods of evaluating tire cord performance, are described. Diagrs, graphs, 4 refs.

NEW TIRE-REINFORCING MATERIALS. C. A. Litzler. Mech. Eng. 82: 76-81 (Feb. 1960). (1362)

Current tire developments in Europe and America are considered. The use of wire, glass fiber, and various manmade fibers as reinforcing cords is discussed. (Rayon and nylon cord developments are not included). Graphs, tables, 8 refs.

EFFECT OF TENSILE STRESSES (THREAD TENSION) ON THE STRENGTH AND ELONGATION PROPERTIES OF YARNS AND ON THEIR BEHAVIOR DURING FURTHER PROCESSING. H. Stein. Z. ges. Textil-Ind. 61, No. 21: 850-854; No. 23: 972-976 (1959). In German. Through BCIRA 40: 405 (1960). (1363)

Results of extensive experiments, carried out by means of modern testing devices (Elmataster, cathode-ray oscillograph, Statigraph, Fafegraph, bundle-strength tester) to study the behavior of yarns from various raw materials during further processing, are summarized. The testing methods and operations necessary are described, and properties of the material, which are responsible for its different behavior during processing and for the streakiness, shrinkage, or wavy character of knitted or woven fabrics, are pointed out.

CONTINUOUS STRESS ON ARTIFICIAL YARNS. H. Biedermann and E. Geiger. Helv. Chim. Acta 42, No. 6: 1870-1877 (1959). In German. Through BCIRA 40: 413 (1960). (1364)

The time-dependent elongation course under constant load until break was examined on viscose yarn and nylon cord, and it was found that the time-elongation function is similar for both products. The relationship between breaking load and breaking time is expressed by an equation.

SPLICING CARPET YARNS OF DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1960. 3 p. Bull. N-124 (replaces Bull. N-106). Free. (1365)

A technique and splicing compound are suggested for an improved nylon carpet yarn splice.

TRANSPORT OF YARN WITHOUT PACKING. S. V. Chelyshkin. Tekstil. Prom. 19, No. 9: 54-58 (1959). In Russian. Through BCIRA 40: 301 (1960). (1366)

Mechanized transport on 3 conveyor belts is recommended for increased productivity of spinning machines. The process is described and illustrated.

STUDY ON BLENDED YARNS. PART 2. FATIGUE RUPTURE OF BLENDED YARNS OR CORDS CONSISTING OF TWO KINDS OF CONTINUOUS FILAMENTS. H. Noshi, M. Shimada, and T. Kusano. J. Textile Machy. Soc. Japan 12, No. 11: 1-10 (1959). In Japanese (English summary). Through BCIRA 40: 411 (1960). (1367)

Three kinds of yarns made from two different filaments, selected from rayon, Terylene, and nylon, were examined. A theoretical equation was derived, and the most effective blending ratio calculated.

IMPROVED SPINNABILITY OF WOOL IN BLENDS WITH ARTIFICIAL AND SYNTHETIC FIBERS. V. E. Gusev. Tekhnol. Tekstil. Prom. No. 4(11): 86-93; No. 5(12): 82-88 (1959). In Russian. Through BCIRA 40: 495 (1960). (1368)

The correct choice of the staple fiber (as regards fineness and length) to be blended with wool is shown to be of importance for all yarn counts; it affects the irregularity and strength of the blended yarns, the yarn yield, and the number of end-breaks during weaving.

INTRODUCTION TO THE STUDY OF ABRASION RESISTANCE ON WORSTED YARNS. A. Barella. Ann. Sci. Textiles Belges No. 3: 11-32 (Sept. 1959). In French. Through BCIRA 40: 588 (1960). (1369)

The measuring techniques and apparatus used (the Abrafil) are described, and the effect of testing conditions (units used to describe the resistance to rubbing, thread tension, number of contact points, velocity), the relationship between abrasion resistance and other yarn parameters, and the effect of twist on abrasion resistance are discussed. A study is also made of the statistical distribution characteristic for the parameter measured and of its effect on the latter, either by altering the test conditions or the properties of the yarn.

APPLICATION OF CONSTANT TENSION WINDING TESTS TO JUTE YARNS. B. L. Banerjee (Indian Jute Mills Assoc. Research Inst.). Indian Textile J. 70: 144-149, 158 (Dec. 1959). (1370)

The object of the investigation was to determine the loads suitable for different types of yarns under the constant tension of which an average yarn, unwound from spools or bobbins, is expected to show a predetermined number of breaks per 1,000 yards and to examine how these loads are related with the other properties of yarns, grist, tensile strength, and regularity. Graphs, tables, 3 refs.

EXPERIMENTAL INVESTIGATION INTO THE RELATIONSHIP BETWEEN FINENESS, TENSION, AND ELONGATION OF RAW SILK FILAMENT MOVING AT CONSTANT SPEED. E. B. Rubinov. Tekhnol. Tekstil. Prom. No. 4(11): 44-53 (1959). In Russian. Summary in BCIRA 40: 276 (1960). (1371)

MODIFIED FILAMENT YARNS FOR KNITTED GOODS. Hosiery Trade J. 67: 101-120 (Feb. 1960). (1372)

Guide to modified filament yarns in the U.K., p. 102-105; Flow chart and photomicrographs of yarn classes and types, p. 105-106; Reports from leading throwsters, p. 107-113; Agilon D: edge crimping with controlled bulk, p. 113-114; Future of bulk continuous filament yarns, p. 114-118; Hints on knitting bulked continuous filament yarns, p. 120.

PART 1. STRUCTURE OF SEWING THREADS. I. O. Skol'nik and A. M. Nessler. PART 2. MEANS FOR IMPROVING THE QUALITY OF SEWING THREADS. G. V. Sokolov. Tekstil. Prom. 19, No. 9: 60-62; 62-63 (1959). In Russian. Through BCIRA 40: 304 (1960). (1373)

Several means for improving the quality of sewing threads by changing the methods of production are pointed out, e.g. by introducing a more diagonal twist, increasing the final twist coefficient to 200-215, using a heavier traveler during twisting, introducing preliminary doubling on automatic winding machines, using higher counts of the initial yarn, and retaining the number of doublings.

MEASURING PHASE WAVE VELOCITY OF THREADS BY LONGITUDINAL PULSE WAVE UNDER VARIOUS TENSIONS. M. Suematsu (Gunma Univ.). J. Textile Machy. Soc. Japan 5: 39-41 (Dec. 1959). (1374)

This study discusses the loads and phase velocities of the longitudinal pulse stress waves of several kinds of threads (raw silk, degummed silk, viscose rayon spun yarn, and woolen yarn) under small tension. An experiment showed that: (1) The pulse velocity of a thread increases with an increase in tension. (2) Young's longitudinal modulus of a thread increases with an increase in tension. (3) The rate of increase in Young's longitudinal modulus for the load of spun yarns makes an exceedingly large value under weak tension of yarn. Diagrs, graphs, table, 9 refs.

TENSION OF VISCOSE AND NYLON YARNS WHILE RUNNING. M. Maeda and T. Yamaguchi (Fukui Univ.). J. Textile Machy. Soc. Japan 5: 21-38 (Dec. 1959). (1375)

The authors have made experiments, taking the hysteresis effect into consideration, to see how the tension of a running yarn is affected by external forces. The following experiments were made: (1) Static experiment--to see how the tension of a running yarn changes with changes in draft force and in the running speed of the yarn. (2) Dynamic experiment--to see how the tension of a running yarn, when elongated periodically, changes with changes in draft force, in the running speed of the yarn, and in the amplitude of elongation which the yarn receives periodically. The samples used in both experiments were viscose and nylon filament yarns. Diagrs, graphs, tables, 12 refs.

STRUCTURAL IRREGULARITY OF COTTON YARN AND ROVING. T. A. Frolova. Tekhnol. Tekstil. Prom. No. 5(12): 59-70 (1959). In Russian. Through BCIRA 40: 730 (1960). (1376)

Results from experiments are reported, which were carried out to study the distribution of fiber lengths in the cross-sections of yarns and rovings, the variations in the mean fiber length over the length of the products, the changes in fiber length occurring during the spinning process, and the movement between fibers. The type of drafting mechanism on spinning machines was not found to have an appreciable effect on the irregularity of yarn structure due to variations in mean fiber length in the cross-section.

FEATURES OF NEW BRITISH YARN MODIFICATION PROCESSES. Knitted Outerwear Times 28: 5, 32 (Mar. 7, 1960). (1377)

The EP1 friction twist machine for producing false-twist nylon and the Astralene-C bulking and relaxing process for Crimplene yarn are briefly described.

CRIMPLENE FOR KNITWEAR. C. M. Shorthouse (Imp. Chem. Inds. Ltd). Textile Merc. 142: 275-277 (Feb. 26, 1960). (1378)

The properties of Crimplene (bulked Terylene) are compared with those of other bulked yarns, and the effect of these properties on knitting and finishing is discussed.

TASLAN TEXTURED YARNS. E. R. Berling, Jr. (E. I. du Pont de Nemours & Co.). Textile Inds. 124: 84-89, 107 (Mar. 1960). (1379)

The article includes information on the basic texturing techniques used, properties, warping, quilling, slashing, weaving, knitting, wet processing, styling, and end uses. Photos, diagrs.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

RELATION BETWEEN THE SHAPE OF WARP BOBBINS AND THE UNWINDING PROCESS. Y. Miura, K. Ishizuka, and H. Tsuboi. J. Textile Machy. Soc. Japan 12, No. 11: 11-14 (1959). In Japanese (English summary). Through BCIRA 40: 317 (1960). (1380)

The effects on unwinding of the angle of inclination of the yarn layers, the pitch of the coil, and the height of the chase were examined for a combination wind bobbin.

DETERMINATION OF YARN VELOCITY AT APEX OF UNWINDING BALLOON ON WINDING MACHINE M-150. E. D. Efremov. Tekhnol. Tekstil. Prom. No. 5(12): 104-110 (1959). In Russian. Through BCIRA 40: 749 (1960). (1381)

Experiments showed that the irregular thread movement during rewinding on the M-150 machine is due to the uneven rotation of the winding roller, the nonuniform winding rate, the variable distance between unwinding and winding point, and the irregular depth of the spiral groove of the thread divider. The empirical diagram obtained for the thread velocity at the top of the balloon expresses the basic kinetic mechanism of winding, and can be used in studying the winding process and also in the construction of new winding machines.

BOTTLE BOBBIN WINDER. Plutte Koecke & Co. Textile Weekly 60 (1): 621, 629 (Mar. 11, 1960). (1382)

The FM winder produces two types of large size package; an easily permeated type to satisfy the requirements of package dyeing, and a supply package for warping or automatic winding. Its features and advantages are noted. Photos.

RELAX MULTICYLINDER SIZING MACHINE. Tattersall & Holdsworth. Can. Textile J. 77: 45-46 (Mar. 18, 1960). (1383)

Features and advantages of this Dutch sizing machine are cited. Diagr.

AUTOMATION IN SIZE PREPARATION. Russell Mfg. Co. Textile Inds. 124: 80-83 (Mar. 1960). (1384)

The system is described and illustrated by photographs and a flow diagram.

EFFECTS OF THE WINDING PROCESS ON THE CLEANLINESS OF SOFT TWISTED YARNS FOR HOSIERY AND KNITTING MILLS. E. Kirschner and H. Weber. Melliand Textilber. 40, No. 12: 1372-1376 (1959). In German. Through BCIRA 40: 496 (1960). (1385)

The causes of fiber accumulations in the form of corkscrew-like structures loosely wound around the yarn core are investigated, and means are enumerated for their prevention. The electro-capacitive measuring principle of the Hy-Lo indicator (Zellweger AG, Uster), in which the sample to be tested passes the measuring condenser, without touching it, was found applicable for counting the yarn imperfections.

TOYOBO TYPE AUTO COP FEEDER (ACF). Howa Machy. Ltd. J. Textile Machy. Soc. Japan 5: 73-74 (Dec. 1959). (1386)

Toyobo type auto cop feeder is designed for automatic cop feeding of traveling spindle package winders. ACF requires no labor except supplying cops to horizontal feed lattice. It draws out yarn ends from the cop, knots them with the yarn ends of a cheese, and automatically feeds them to the winder. Features are described.

IMPROVED SWISS WARPING MACHINE: RUTI TYPE ZD. Textile Merc. 142: 154-155 (Jan. 29, 1960). (1387)

Improvements give increased accessibility of the warp from the operator's position and, in general, provide high quality beaming with a maximum degree of automation.

IMPORTANCE OF VISCOSITY MEASUREMENT ON TEXTILE SIZES. H. Martin and D. Putzger. Deut. Textiltech. 9, No. 11: 588-590 (1959). In German. Through BCIRA 40: 318 (1960). (1388)

In this review, the author discusses the flow behavior of starch sizes, devices for measuring their viscosity, effects of their structural viscosity on the sizing process, and automatic control of the size condition in the size box. It is pointed out that, for automatically maintaining constant the size condition in the trough, the viscosity can not be used as a control value. 15 refs.

WARP STRETCH CONTROL IN SIZING. Ormerod Eng. Ltd. Textile Merc. 142: 106, 109, 117 (Jan. 22, 1960). Textile Weekly 60 (1): 325-326 (Feb. 5, 1960). (1389)

The QP-Shirley stretch regulator is a special positive infinitely-variable drive designed for insertion into the side-shaft of any tape frame and gives preset, continuously variable control of the stretch applied to the warp sheet between the squeezing rollers and the draw roller. Photo, diagr.

METHOD OF CALCULATING THE AMOUNT OF SIZE AND MATERIALS REQUIRED DURING SIZING OF COTTON YARN. A. V. Kuligin. Tekhnol. Tekstil. Prom. No. 4(11): 94-100 (1959). In Russian. Through BCIRA 40: 320 (1960). (1390)

Equations and examples are given for calculating the true and apparent percentage adhesion, the normal starch consumption per ton of yarn, the consumption of size per day, the number of cookings per day and the size composition, the dimensions of the cooking vat, and the yearly consumption of sizing materials.

ELECTRICAL DEVICE PK-2 FOR MEASURING WARP ELONGATION DURING SIZING. K. G. Alekseev. Tekstil. Prom. 19, No. 11: 39-42 (1959). In Russian. Through BCIRA 40: 751 (1960). (1391)

The apparatus by means of which the warp elongation is reduced from 8 to 5.5% is illustrated, and its mechanism described.

DETERMINATION OF WINDING VELOCITY, YARN BREAKAGE FREQUENCY, AND WORKING TIME STANDARD FOR THE CHEESE WINDING MACHINE. G. Kleiner. Z. ges. Textil-Ind. 62, No. 1: 16-19 (1960). In German. Through BCIRA 40: 750 (1960). (1392)

A work study is made on the cheese machine to determine the time standard for the operations involved. The diagrams given are directly related to the wage problem.

CONTRIBUTION TO THE SYSTEMATIC STUDY OF SIZING. PART 10. PRACTICAL CONSEQUENCES OF A THEORETICAL STUDY OF SIZING. J. Meybeck and R. Schutz. Bull. Inst. Textile France No. 83: 99-126 (Aug. 1959). In French. Through BCIRA 40: 319 (1960). (1393)

The study, carried out over a period of 10 years in the Textile Research Centre at Mulhouse, made it possible to establish relationships between the behavior of warp yarns on the loom and some of their properties (elasticity, plasticity, toughness index, abrasion resistance); to determine the physical and mechanical conditions required for satisfactory passage of the yarn through the sizing machine; and to ascertain optimum conditions for the preparation of the size and its application to the yarn. Principles of an ideal sizing machine are outlined.

THE SIZING MACHINE. Silk Rayon Inds. India 2: 15-20 (Dec. 1959). (1394)

Sizing manmade fiber warps.

Weaving C2

CONSTRUCTION AND MECHANISMS OF WEAVING MACHINES. H. Perner. Deut. Textiltech. 9, No. 11: 590-594 (1959). In German. Through BCIRA 40: 322 (1960). (1395)

Definition is given of a weaving machine, and various types (with gripper shuttles; grippers, needles for weft insertion or thread guides; shuttleless machines and machines with weft yarn carriers) are reviewed, e.g. the Neumann, Sulzer, Gabler, Seaton, Dewatex, Thoumire, Ripamonti, Nicolet, Päabo, Kovo, Von Mutter, and the Spanish multiple warp beam weaving machine.

TOYODA GM TYPE AUTOMATIC LOOM EQUIPPED WITH 4 x 1 SHUTTLE BOXES. Toyoda Automatic Loom Works Ltd. J. Textile Machy. Soc. Japan 5: 75-76 (Dec. 1959). (1396)

This automatic loom, equipped with four shuttle boxes on one side, is suitable for weaving cotton and rayon spun yarn fabrics (i.e. ginghams). The weft feeler is located on the shuttle-changing side and can detect the weft yarn whenever the shuttle enters the shuttle box on that side. Features are described and specifications given.

NEW FINDINGS RESULTING FROM THE USE OF SULZER WEAVING MACHINE INSTALLATIONS. M. Steiner. Textil-Rundschau 14, No. 11: 642-658 (1959). In German. Through BCIRA 40: 323 (1960). (1397)

The problems discussed include: the conception of weft insertion, the weaving range of the weaving machine, personnel requirement, preparation of the textile material, selvage formation, replacement costs of machine components, modern factory planning, manufacture and assembly of the weaving machine, research and development work, economic advantages, and future aspects. The statistical data given are based on extensive investigations and plant and production results.

GUNNE HIGH SPEED AUTOMATIC LOOM FOR COLORED WEAVING. Spinner u. Weber 77, No. 23: 1443-1445 (1959). In German. Through BCIRA 40: 324 (1960). (1398)

The loom described was developed from the known Günne loom and the +GF+ automatic loom for multicolored weaving.

IDEAS UNDERLYING WEAVING MACHINE PATENTS. PART 8. R. H. Rossmann. Textil-Praxis 14, No. 11: 1133-1137 (1959). In German. Through BCIRA 40: 321 (1960). (1399)

Fourteen more circular looms are described and their construction criticized.

SHUTTLELESS WEAVING: CZECH EXPERIENCE WITH THE JET SYSTEM OF WEFT INSERTION. V. Duxbury. Textile Merc. 142: 111-115 (Jan. 22, 1960). (1400)

The advantages of the jet system of weft insertion on the Kovo loom are cited, and its economics are compared with that of conventional loom installations. Photos, tables.

CIRCULAR-TYPE WARP LOOM. Textile Weekly 60 (1): 504 (Feb. 26, 1960). (1401)

This German warp loom is equipped with latch needles fixed vertically in a circular ring which has a continuous upward and downward movement, and can handle the production of heavier or lighter-weight goods on the same machine. Its operation is described. Diagr.

WATER-JET LOOM PRODUCTIVITY. P. Abbenheim. Textile Inds. 124: 111, 115-117, 121 (Mar. 1960). (1402)

The productivity of the hydraulic or water-jet loom is compared with that of the conventional loom. Photos.

LOOMFIXER AND HIS JOB. PART 16. HOW TO KEEP THE HARNESS LIFTING MECHANISM IN GOOD OPERATING CONDITION. W. Westbrook. Textile Bull. 86: 60-61 (Mar. 1960). (1403)

REEQUIPMENT IN WEAVING. A. Gasser (Ruti Machy. Works Ltd). Textile Merc. 142: 247-252 (Feb. 19, 1960). (1404)

Some of the considerations to be taken into account when judging the desirability of reequipment are defined, and the general features of automatic looms and the specific mechanisms of the Ruti B-class looms are described. Diagrs.

SUZUKI'S AKC TYPE COP-CHANGING AUTOMATIC LOOM EQUIPPED WITH 1 x 2 SHUTTLE BOXES. Suzuki Loom Mfg. Co. Ltd. J. Textile Machy. Soc. Japan 5: 77 (Dec. 1959). (1405)

Features are described and specifications given.

HIRANO'S HG TYPE SUPER HIGH SPEED LOOM. Hirano Loom Works Ltd. J. Textile Machy. Soc. Japan 5: 76-77 (Dec. 1959). (1406)

Hirano's HG type super high speed automatic loom is of a cop changing system and weaves high quality cloths of cotton, staple fiber, and synthetic fibers, both thin and heavy. Features are described.

TSUDA'S LMA TYPE LOOM. Tsudakoma Industrial Co. Ltd. J. Textile Machy. Soc. Japan 5: 75 (Dec. 1959). (1407)

This low-frame type loom has four freely changeable shuttle boxes on each side (4 x 4). It is suitable for weaving synthetic spun yarn fabrics of dobby patterns. The shuttles on this loom are larger than those on the conventional loom. Shedding is by an open shedding system complete with a 24-shift positive dobby. Specifications are given.

TSUDA'S LMD TYPE AUTOMATIC LOOM. Tsudakoma Industrial Co. Ltd. J. Textile Machy. Soc. Japan 5: 74-75 (Dec. 1959). (1408)

LMD type automatic loom is of two different types. One is a single-shuttle box (1 x 1) type. The other is a two-shuttle boxes type (2 x 1), having two boxes on one side and one on the other. The two-shuttle boxes type is capable of taking weft yarns of two different colors, or two different kinds of weft yarns, at the same time. Features are described and specifications given.

GAGES IN DRAPER LOOM MAINTENANCE. PART 3. INFLUENCE OF BAD ALIGNMENT ON SHUTTLE WEAR (continued). Textile Inds. 124: 94-97 (Mar. 1960). (1409)

The steps in inspecting shuttles for wear due to misalignment and taking corrective action are described. Photos.

DETERMINATION OF ATMOSPHERIC CONDITIONS IN WEAVING PLANTS FOR THE PRODUCTION OF SPUN RAYON FABRIC. V. Y. Davydov. Tekhnol. Tekstil. Prom. No. 5 (12): 131-134 (1959). In Russian. Through BCIRA 40: 757 (1960). (1410)

A formula, and a humidity equilibrium curve characterizing the physico-chemical properties of the warp are recommended. At a production of 5 m/hr of spun rayon fabric, the optimum summer (and winter) conditions were determined as: temperature 25-26° C (23-24° C); rh 55% (60%); moisture content of the sized warp 8-9% (6-7%).

LAY ECCENTRICITY AND ITS EFFECT ON WEAVING. T. Ramsbottom. Textile Mfr. 86: 47-53 (Feb. 1960). (1411)

The effects of the various settings on the fabric being woven, shuttle flight in relation to crankshaft movement, shed size, and distance traveled by the lay before the shuttle enters the shed are considered. Diagrs, graphs.

DETERMINATION OF THE WEFT TENSION DURING PICKING. U. Chzhen-shi. Tekstil. Prom. 19, No. 11: 43-45 (1959). In Russian. Through BCIRA 40: 756 (1960). (1412)

An equation is given for determining the weft tension, taking into account the elasticity modulus, the cross-sectional area of the yarn, the picking force exerted on a single thread, the distances between the warp threads in the selvage, the pressure of the warp thread in the vertical direction and the length unit in one repeat. The experimental data were found to be in good agreement with those calculated.

SOME THEORETICAL AND PRACTICAL PROBLEMS OF INTRODUCING THE WEFT INTO THE SHED. V. S. Grigor'ev. Tekhnol. Tekstil. Prom. No. 5 (12): 89-94 (1959). In Russian. Through BCIRA 40: 755 (1960). (1413)

Weft insertion is studied and compared on various loom constructions (with and without shuttles). Reference is made in particular to the dynamic stresses occurring in shuttle looms (weft tensions at the moment when the yarn runs off the pirn, due to balloon formation, and at the shuttle eye).

AUTOMATIC VERSUS NONAUTOMATIC LOOMS. P. A. Mars (Brit. Rayon Research Assoc.). Textile Weekly 59 (2): 1161-1162, 1165 (Nov. 20, 1959). (1414)

Results of a survey made at 34 mills of the effect of loom type on the quality of spun and filament rayons are summarized.

MULTIBOX ELECTRIC WEFT FEELER. George Hattersley & Sons Ltd. Textile Weekly 60 (1): 561 (Mar. 4, 1960). Textile Merc. 142: 346 (Mar. 11, 1960). (1415)

Advantages of the mechanism for semi-automatic weaving are cited.

TAYLOR-MADE SHUTTLE. PilTex Ltd. Textile Weekly 60 (1): 141 (Jan. 15, 1960). (1416)

In this new shuttle, the jaw holding bolt has been replaced by a 3/8 in. diameter steel pin, while the complete assembly comprising grooved jaw, internal packing plate, and cover guide, is secured by a vertical bolt and nut in addition to the normal vertical screw. As a result, the counter bores on the reed side of the shuttle are almost eliminated.

VERTICAL WARP DISPLACEMENT IN THE REGION OF THE HEDDLE EYE DURING THE WORKING CYCLE OF SHAFT MOVEMENT. C. Yuan-Pu. Tekhnol. Tekstil. Prom. No. 5 (12): 95-103 (1959). In Russian. Through BCIRA 40: 753 (1960). (1417)

The warp elongation taking place during shed formation is proportional to the squared depth of the shed. Therefore, when calculating the warp elongation in dependence of the deflection angle of the main loom shaft, it is necessary to know for each position of the latter the depth of the shed which itself is determined by the vertical displacement of the warp thread in the region of the heddle eye. This warp displacement differs at some deflection angles of the main shaft from the displacement of the shafts. The problem is treated theoretically, and equations are given for determining the depth of the shed in dependence of the deflection angle of the main shaft.

METHODS OF ADJUSTING PICKING MOTIONS. R. A. Mamedova. Tekhnol. Tekstil. Prom. No. 4(11): 101-104 (1959). In Russian. Through BCIRA 40: 325 (1960). (1418)

REEQUIPMENT ALTERNATIVES FOR THE WEAVER. K. Greenwood (Brit. Rayon Research Assoc.). Textile Recorder 77: 73-75 (Mar. 1960). (1419)

The author examines recent trends in weaving machinery for the Lancashire industry, and discusses the place of the various looms and accessories in the general pattern of development. Photos.

LENO WEAVING. Grob & Co. Ltd. Textile Weekly 60(1): 198, 200 (Jan. 22, 1960). (1420)

Types of frames employed in the leno harness are described and illustrated. Diagrs.

WOVEN CARPET. PART 9. H. Osswald. Melliand Textilber. 40, No. 12: 1410-1414 (1959). In German. Through BCIRA 40: 502 (1960). (1421)

A further technique for weaving Axminster (Royal or spool Axminster) carpets, in which a separate pile beam is used for each row of tufts, is described.

WHAT'S NEW IN CARPET JACQUARDS. A. Crossland. Textile Inds. 124: 103-107 (Mar. 1960). (1422)

This review of the different jacquards used in the carpet industry includes descriptions of the principles of the cordage or wire and double Wilton loom jacquards, gripper Axminster, and the new float jacquard.

Knitting C3

PREDICTORY STITCH COUNT, YIELD, OUTPUT OF PATTERNED KNIT FABRIC. T. Hirschhorn (Kenwood Knitting Mills). Knitted Outerwear Times 28: 9, 13, 64 (Mar. 14, 1960). (1423)

PATTERN SCOPE OF WARP KNITTING EQUIPMENT. PART 14A. A. Reisfeld. Knitted Outerwear Times 28: 7-8, 11 (Feb. 29, 1960). (1424)

Patterns available with the diagonal movement are discussed.

WARP KNITTING SUPPLEMENT. Textile Weekly 60(1): 245-256 (Jan. 29, 1960). (1425)

History and development, p. 245-246; Yarn, p. 246-250; Machinery development, p. 250-251; Economics and organization, p. 254; Accessories, p. 255-256.

PATTERN BUILDING. PART 1. WITH THE WILDT-MELLOR BROMLEY GEOMETRIC UNIT. Hosiery Trade J. 67: 80-81 (Feb. 1960). (1426)

AUTOMATIC FASHIONING OF KNITWEAR. S. A. Monk Ltd. Textile Recorder 77: 76-77 (Feb. 1960). (1427)

Operational details of an automatic fashioning control mechanism for full-fashioned knitting machines are described. Photos, diagr.

AUTOMATIC KNITTING MACHINES FOR FULLY-FASHIONED GARMENTS. B. A. Monk. Fibres and Plastics 21: 69-72 (Mar. 1960). (1428)

By means of the developments described, one person is able to supervise 24 knitting heads on two machines, all sequences being automatically controlled by means of a pin drum and a set of digital counters, operating through motors and solenoids. Photos, diagrs.

HALF-GAGE KNITTING ON BENTLEY-WILDT SPJ. Bentley Eng. Co. Ltd. Hosiery Trade J. 67: 116-117 (Mar. 1960). (1429)

The modification of the SPJ double cylinder purl machine for half-gage knitting is described. Photos.

STIBBE MAS INTERLOCK MACHINE. G. Stibbe & Co. Ltd. Hosiery Trade J. 67: 96-97 (Mar. 1960). (1430)

Striping is done by means of a jacquard control mechanism for putting feeders into and out of action.

FEATURES OF THE PUNCHED CARD CONTROL SYSTEM OF THE BENTLEY-COTTON UO/AE FULL FASHIONED KNITTING MACHINE. Bentley Eng. Co. Hosiery Trade J. 67: 76-79 (Mar. 1960). (1431)

The punched card movement control system not only determines, by means of electronic counters, the number of courses and fashionings and the fashioning frequencies in each garment part but also initiates the automatic turn-round between sets, the operation of the striping chain and, during the dipping motions, the cancellation of certain unwanted loop-transferring movements. Photos, diagrs.

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 67: 74-77 (Feb. 1960). (1432)

Among the innovations described are: Schmidt yarn tension meter DX (Trentini & Schmidt, Garmisch); Keinath automatic U-type flat machine; warp knit structure with rubber thread underlaps; plush structure for seamless hose splicing.

MANUFACTURE OF LACE AND OTHER FANCY FULL FASHIONED STOCKINGS. J. B. Lancashire. Hosiery Trade J. 67: 68-71, 132 (Feb. 1960). (1433)

The use of such devices as the picot bar and dropper jacquard lacing mechanism for the production of fancy hosiery on the Cotton machine is described. Photos.

SIMPLE SEAMLESS HOSIERY QUALITY TEST. D. Numan. Textile Inds. 124: 137-139, 142-147 (Mar. 1960). (1434)

A mill system for quality control which has been used for 20 years is described, and pointers on maintaining quality are given. Photos.

TRENDS IN STOCKING MANUFACTURE. D. W. Smith (Brit. Nylon Spinners Ltd). Textile Mfr. 86: 20-21 (Jan. 1960). (1435)

New methods used in hosiery manufacture to reduce costs without lowering quality include: Smithknit technique for seamless hosiery welts; automatic end cutters, length control devices, and toe closure methods for seamless hose; and dyeboarding machines.

LACE ON MODERN RASCHEL MACHINES. PART 1. B. Wheatley (Nottingham & District Tech. Coll.). Man-Made Textiles 37: 63, 65 (Mar. 1960). (1436)

The reasons why raschel machinery has been generally adopted for the manufacture of warp knitted lace and the developments which have taken place are described. Photos.

TWIN FEED HOSIERY MACHINE. Francesco Lonati. Textile Recorder 77: 101 (Mar. 1960). (1437)

Among the features claimed for the seamless machine are a high operating speed, extreme versatility, and the possibility of one knitter minding no less than 54 machines. Photos.

Fabrics C4

PROGRESS IN THE MANUFACTURE OF TUFTED CARPETING. P. Ellis. Textile Mfr. 86: 15-19 (Jan. 1960). (1438)

In this brief review of developments in tufted carpet manufacture, the author discusses fibers and yarns used, yarn delivery and fabric takeup mechanisms, needle spacing and stitches, pile height, machine widths and productivity, finishing sequence, and pattern forming methods.

TUFTED CARPETS. Rayonne et Fibres Synthet. 15, No. 12: 1333-1372 (1959). In French. Through BCIRA 40: 760 (1960). (1439)

The following papers, presented at the meeting organized for carpet manufacturers by the French Association for Artificial Textiles (Paris, November 1959), are reprinted: Development and manufacture of tufted carpets, by H. Sneyd, p. 1333-1357; Dyeing, printing, and finishing of tufted carpets, by R. C. Cheetham, p. 1357-1370; Main characteristics and uses of tufted carpets, by N. Drisch, p. 1371-1372.

CONTROL OF DELAMINATION IN NATURAL RUBBER BONDED NONWOVEN FABRICS. E. G. Pole. Textile Merc. 141: 784-787 (Dec. 11, 1959). (1440)

Delamination occurs because the latex particles are too small to be trapped in the fibrous structure and are carried to the surface by the movement of water during the drying process. A method of preventing migration of the latex particles is by the use of a gelling agent. In general, they may be divided into two classes: external gelling agents, and internal gelling agents. Since internal gelling agents are likely to be more easily applied in practice, the article is devoted to their possible use in the production of natural rubber-bonded fabrics. Photos, diagrs, tables, 3 refs.

DESIGN IN WOVEN STRUCTURE. PART 91. BACKED CLOTHS. D. C. Snowden. Wool Rev. 33: 18-19 (Feb. 1960). (1441)

THROW AWAY YOUR CLOTHES. A. A. Atwell. Industrial Research 2: 38-42 (Feb./Mar. 1960). (1442)

Disposable fabrics (stretchable paper, random webs of fiber, "sprayed-on" rubber fibers, etc.) and their applications are discussed. A list of manufacturers of nonwoven fabrics, nonwoven chemical fibers, and binders for nonwovens is included.

PATTERNED SATEEN FABRICS. R. Sansone. Textile Weekly 60 (1): 197 (Jan. 22, 1960). (1443)

WARP SPLASHES AND CRUSHED WEFT IN FABRICS FROM SYNTHETIC FIBERS. R. Schneider. Reyon Zellwolle Chemiefasern 9, No. 11: 735-738 (1959). In German. Through BCIRA 40: 598 (1960). (1444)

Examples are given of flat pressed polyester and polyamide threads, and their causes are investigated. After dyeing the fabric, these defects may appear as dark or light spots.

COTTON FAULTS AND SHRINKAGE AS PROBLEMS FOR THE MAKER-UP. W. E. Symonds (Kayser Bondor Ltd). Textile Weekly 59 (2): 1078-1081, 1094 (Nov. 13, 1959). (1445)

Weaving and finishing faults affecting the suitability of fabrics for various types of garments are discussed.

FABRIC STAIN REMOVAL DEVICE. Foster Knitting Mach. Co. Ltd. Textile Weekly 59 (2): 1021 (Nov. 6, 1959). (1446)

Spot cleaning "gun" saves time in stain removal. It may also be used to clean reeds.

NEW DESIGN METHODS TO INCREASE FABRIC OUTPUT. D. L. Garrett. Textile World 110: 62, 170, 172 (Mar. 1960). (1447)

The use of new design methods for eliminating fabric defects and improving weaving conditions is described. Diagrs.

TEXTILES IN THE SPACE AGE. Am. Textile Reptr. 74: 9-11, 48 (Mar. 10, 1960). (1448)

Recent developments and potential uses of textiles in space projects are briefly reviewed.

PRODUCTION OF WORSTED FABRICS FROM SWALEDALE WOOL. R. G. Oversby and F. Farnell (Bradford Inst. Technol.). Textile Merc. 141: 819, 821 (Dec. 18, 1959). (1449)

CLOTH TERMS AND PARTICULARS: LINEN FABRICS. W. Middlebrook. Textile Mfr. 86: 58-59 (Feb. 1960). (1450)

Descriptions, warp and weft, ends and picks, and related information concerning cambrics, lawns, net canvas, handkerchiefs, linings, sheetings, glass cloths, crepes, etc. Diagrs.

DEFECTS CAUSED BY SHUTTLE IMPACT AND CRUSHED WEFT IN FABRICS FROM SYNTHETIC FIBERS. R. Schneider. Bull. Inst. Textile France No. 83: 147-152 (Aug. 1959). In French. Through BCIRA 40: 424 (1960). (1451)

Three typical examples are given of defects in fabrics made, respectively, from a polyester/viscose fiber blend (67:33%), pure polyamide staple fibers, and polyester/cotton (75:25%) or viscose. The defects, which become visible only in the dyed fabrics, were found to be due to crushed warp threads caused by the impact of the shuttle against the warp ends during weaving and, similarly, by crushed weft threads.

NEW FABRIC HAS VINYL AND KNIT FACINGS. C. Reichman. Knitted Outerwear Times 28: 3, 30 (Mar. 7, 1960). (1452)

Urethane foam sandwiched between a vinyl cloth and a knitted fabric produces a reversible garment fabric.

LABORATORY TESTED AND APPROVED. P. J. Fynn (J. C. Penney Co.). Am. Dyestuff Reptr. 49: 159-163 (Mar. 7, 1960). (1453)

The importance of a testing laboratory on the retail level as an aid to sound merchandising and consumer satisfaction.

MANMADE FIBERS IN FELT WEAVING. Textile World 110: 59 (Mar. 1960). (1454)

The advantages of manmade fibers for woven felts such as printing blankets, decatizer leaders, lapping cloths, dyebeck reel covers, and papermakers felt are briefly noted.

DESIGNING OF PILE FABRICS. CHAPTER 4. HIGH-PILE "TOY-FUR" FABRICS. E. B. Berry (N. C. State Coll. School of Textiles). Textile Bull. 86: 62-65, 74 (Mar. 1960). (1455)

THIRD DIMENSION IN WEAVING. A. R. Campman (Raymond De-Icer & Eng. Co.). Textile Merc. 140: 855-857 (June 26, 1959). (1456)

INVESTIGATION OF THE WEAR OF TEXTILE MATERIALS BY RADIOACTIVE TRACER. N. Osawa, M. Kishino, and M. Ito. Bull. Textile Research Inst. (Japan) No. 50: 43-48 (1959). In Japanese (English summary). Through BCIRA 40: 419 (1960). (1457)

Self-abrasion of spun rayon fabric and abrasion of fabric against emery paper were examined. Fiber is transferred to the abrader and the amount is related to the load, though it does not increase linearly with load at heavy loads.

FINISHING D

THE PROCESSING OF TRICOT FABRICS. C. B. Ordway. Knitter 24: 47-49 (Feb. 1960). (1458)

FINISHING DEVELOPMENTS DURING 1959. Textile Weekly 59 (2): 1429-1434 (Dec. 18, 1959). (1459)

PROGRESS REPORT ON CHEMICAL TREATMENT AND FINISHING. R. W. Pinault. Textile World 110: 75-81 (Mar. 1960). (1460)

Technological advances in preparation and bleaching, heat-setting, dyeing, printing, and chemical finishing are reviewed. Photos.

DYEING AND FINISHING OF KNITTED GARMENTS. PART 2. H. W. Partridge (Stevensons (Dyers) Ltd). Man-Made Textiles 37: 69-70 (Mar. 1960). (1461)

General procedures for mothproofing wool garments, and for dyeing, bleaching, and drying Orlon, Courtelle, and Acrilan garments are given.

TEXTILE FINISHING MACHINES IN THE SOVIET UNION. H. Berndt. Deut. Textiltech. 9, No. 11: 604-608 (1959). In German. Through BCIRA 40: 363 (1960). (1462)

Installations for bleaching, dyeing, and printing are described and illustrated. Some of them were developed and constructed in the Soviet Union.

RECENT TRENDS IN DYEING AND FINISHING MACHINERY: 1959-60. E. Moss (Brit. Cotton Ind. Research Assoc.). Dyer 123: 425-431 (Mar. 11, 1960). (1463)

RECENT TRENDS AND DEVELOPMENTS IN THE DYEING AND FINISHING OF HOSIERY: 1959-60. H. W. Partridge (Stevensons (Dyers) Ltd). Dyer 123: 405-407, 412 (Mar. 11, 1960). (1464)

HOW TO EVALUATE CHART RECORDS FROM PLANT INSTRUMENTS. L. Walter. Dyer 123: 261-265 (Feb. 12, 1960). (1465)

It is pointed out that adequacy of plant supervision depends not only on the number of recording instruments in a plant, but also on their accuracy, responsivity, on the quality of chart records obtained, and on the way in which readings from these charts are dealt with.

TIENTOFIX 58 CONTINUOUS HOSE DYEING AND FINISHING UNIT. Maurice Heliot. Hosiery Trade J. 67: 78-79 (Feb. 1960). (1466)

The features and operation of this automatic unit for the continuous setting, scouring, dyeing, and finishing of stockings made from nylon and other thermoplastic yarn are described.

Chemical processes D1

EFFECT OF BLEACHING TREATMENTS ON THE BEHAVIOR OF LINEN FABRICS DURING FINAL BLEACHING. A. Parisot. Bull. Inst. Textile France No. 82: 59-87 (June 1959); No. 83: 7-24 (Aug. 1959). In French. Through BCIRA 40: 343 (1960). (1467)

Samples from a specially prepared linen fabric have been subjected to 12 different industrial bleaching treatments and then each of the bleached samples to 4 stages of intensive chemical degradation. At the same time, a sample of the bleached fabric was subjected to 100 bleachings under conditions imitating industrial practice. The samples were analyzed at different stages of degradation in 10 laboratories. The results obtained gave useful data as regards the degree of polymerization of the cellulose, the correlation between the solubility index and the DP, the relationship between mechanical properties and DP, and the effect of the bleaching process on the final properties of a fabric subjected to chemical degradation, comparison being made between the 12 bleaching treatments applied.

FINISHING BLENDS OF ORLON AND COTTON IN UNDERWEAR. H. T. Pratt (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 49: 192-193 (Mar. 21, 1960). (1468)

The advantages of 80:20 Orlon/cotton ratio for underwear use are noted, and recommendations for bleaching are given.

PHOTOCHEMICAL TENDERING OF FABRICS AND PROTECTIVE IMPREGNATIONS. N. V. Kalugin. Tekhnol. Tekstil. Prom. No. 4(11): 17-22 (1959). In Russian. Through BCIRA 40: 368 (1960). (1469)

The experiments described showed that the tendering of raw cellulosic fabrics exposed to light can be attributed mainly to microbiological factors, whereas in fabrics treated with waterproofing and combined finishes the tendering during wear is due first to photooxidation and then to microbiological causes. The components of the finishes (when the treated fabric was kept in glass or quartz tubes) remained unchanged for 10 months, while the water absorption of the fabric decreased only slightly. This indicates that the main factor responsible for the decomposition of protective finishes is their water desorption after previous breakdown of the water repellent film by sunlight.

EFFECT OF MICROORGANISMS ON THE STRENGTH OF COTTON FIBERS AND THEIR PRODUCTS. E. A. Sankov. Tekhnol. Tekstil. Prom. No. 4(11): 23-31 (1959). In Russian. Through BCIRA 40: 369 (1960). (1470)

Treatment of cotton yarn with antiseptics (beta-naphthol, dimethylformamide) improves the mechanical properties of the yarn and of products manufactured from it. When using dimethylformamide and biomycin as antiseptics, the treatment with each agent must be carried out separately, e. g. during spinning and during subsequent processes. A 5% aqueous solution of dimethylformamide is sprayed on the picker lap while it is wound on the lap rod, and the yarn hanks are then immersed in a 0.01% aqueous solution of biomycin. In the production of crimped products by the wet method, the biomycin solution is poured in the trough of the crimping machine. Knitted goods are immersed for 20 min in an aqueous dimethylformamide solution after dyeing but before final finishing.

DETERMINATION OF STARCH IN COTTON FABRICS AND ITS ELIMINATION. H. Tramnitz. Spinner u. Weber 77, No. 24: 1492 (1959). In German. Through BCIRA 40: 503 (1960). (1471)

Directions are given for diastatic desizing of cotton textiles (malt, pancreas, and bacterial amylases), and desizing agents causing oxidative and alkaline degradation of starch are enumerated. The completed desizing process or the presence of starch on fabrics is determined by spotting with a few drops of iodine/potassium iodide solution (containing 0.1 g iodine and 1 g potassium iodide in 100 cc distilled water). Starch, if present, gives a dark-blue coloration, while degradation products react with a blue or reddish-violet color.

LAUNDERING "AUTOMATIC" WASH AND WEAR SUITS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Feb. 1960. 2 p. Bull. X-115 (replaces Bull. X-73). Free. (1472)

GROWTH OF THE BRITISH BLEACHING INDUSTRY. S. H. Higgins. Dyer 120: 943-945 (Dec. 19, 1958); 121: 31-32 (Jan. 2, 1959); 263-264 (Feb. 13, 1959); 555-556 (Mar. 27, 1959); 701-702 (Apr. 24, 1959); 34-36 (Aug. 14, 1959). (1473)

Part 1. Growth of the British bleaching industry. Part 2. Development of chlorine bleaching. Part 3. Erection of drying houses. Part 4. Introduction of machine bleaching. Part 5. Origin of starching and tentering. Part 6. Introduction of beetling.

NO-IRON COTTON FABRICS. T. Sørensen. Tidsskr. Textiltek. 17, No. 9: 144-149; No. 12: 201-207 (1959). In Danish. Through BCIRA 40: 547 (1960). (1474)

In this review, the author discusses various types of resins used (urea- and melamine-formaldehyde, ethylene urea, triazone derivatives, triazine compounds, epoxy resins, acetal compounds), the catalysts employed (ammonium salts, amine hydrochlorides, inorganic metal salts), softening agents and other admixtures, and the effect of various resins on crease resistance, tensile and tear strength, resistance to washing and chlorine absorption, and the tendency to develop a fishy odor of some urea-formaldehyde-treated fabrics. 26 refs.

NEW DEVELOPMENTS IN THE FIELD OF FINISHING, ESPECIALLY THE WASH-AND-WEAR FINISH. H. Enders. Melliand Textilber. 40, No. 11: 1315-1326; No. 12: 1454-1462 (1959). In German. Through BCIRA 40: 545 (1960). (1475)

New possibilities for improving the wash-and-wear properties of cotton and spun rayon fabrics are described, with special reference to the chemical nature and properties of the resins used. The processes taking place during finishing and the fabric properties characterizing its wash-and-wear behavior are reviewed. New resin combinations consisting of triazine, triazone and epoxy resins, and triazine ethyleneurea resins and their properties are also mentioned. 51 refs.

THEORIES AND FINDINGS ON SOFTENING AGENTS. W. Brasseler. Z. ges. Textil-Ind. 62, No. 1: 23-25; No. 2: 43-47 (1960). In German. Through BCIRA 40: 721 (1960). (1476)

The author discusses the properties determining the action of a softening agent, changes in the fiber characteristics as a result of the plasticizing action of water (in free and bound form), the effect of plasticizers on the water absorption of textile fibers, and the smoothing properties of plasticizers such as glycerine, castor-oil, fatty acid sulfate, paraffin oil, oleylalcohol sulfate, wax-alcohol sulfate, stearic acid ester of triethanolamine, etc.

FLAME-RESISTANT TREATMENTS FOR CELLULOSE TEXTILES. Fibres and Plastics 21: 73-74 (Mar. 1960). (1477)

The advantages and disadvantages of several recent methods of rendering cellulosic fabrics flame- and glow-resistant are reviewed, together with a description of the Proban process and its method of application.

EPIKOTE 812 COTTON CREASEPROOFING FINISH. Shell Develop. Co. Dyer 123: 94 (Jan. 15, 1960). (1478)

The performance and application of Epikote 812, a nonchlorine retentive finish, are described.

FORMIC ACID COLLOID OF METHYLOLMELAMINE RESIN TREATMENT OF COTTON: PRELIMINARY COST STUDY. O. J. McMillan, Jr., K. M. Decossas, W. N. Berard, W. A. Reeves, E. F. Pollard, and E. L. Patton (So. Reg. Research Lab.). Am. Dyestuff Reptr. 49: 180-181 (Mar. 21, 1960). (1479)

This paper deals with the cost of imparting both rot- and weather-resistance to cotton fabric by the formic acid colloid technique. Diagr, tables, 9 refs.

WET CREASING OF CELLULOSE FIBER FABRICS. Textile Merc. 141: 813, 817 (Dec. 18, 1959). (1480)

Investigations on the factors affecting the ability of cellulose fabrics to resist creasing in the wet state and assist in the shedding of such creases during subsequent drying are briefly summarized. Graph.

CATALYSTS FOR CREASE RESISTANCE. J. T. Marsh. Textile Mfr. 86: 70-74 (Feb. 1960). (1481)

The use of free acids and latent catalysts is discussed.

DEVELOPMENTS IN TEXTILE CHEMICALS: 1959-60. A. F. Kertess (Stockport United Chem. Co. Ltd). Dyer 123: 408-412 (Mar. 11, 1960). (1482)

GUIDE TO NEW TEXTILE AUXILIARIES: 1959-60. Dyer 123: 413-421 (Mar. 11, 1960). (1483)

An alphabetical list of some recently introduced textile chemicals and auxiliaries, with brief notes on their use as described by the manufacturers.

GERBER MV56 AUTOMATIC YARN MERCERIZING MACHINE. Dyer 122: 841 (Dec. 18, 1959). (1484)

IMPROVING THE QUALITY OF OPTICALLY BLEACHED GOODS. J. Sramek. W. Hradecky, L. Temin, and C. Soulak. Textil 14, No. 11: 422-425 (1959). In Czech. Through BCIRA 40: 509 (1960). (1485)

The occurrence of various defects during optical bleaching of poplins, which reduce the quality of the fabric, gave rise to an investigation into the causes of these defects and the effects of drying and Sanforizing on the stability of the bleaching effect, as well as the stability of optical bleaching agents to light and boiling. Optimum technological conditions were established.

ECONOMIC EFFECTIVENESS OF PEROXIDE BLEACHING OF COTTON FABRICS IN IRON BOILERS. N. F. Denisova. Tekhnol. Tekstil. Prom. No. 4(11): 11-16 (1959). In Russian. Through BCIRA 40: 342 (1960). (1486)

It is shown that peroxide bleaching of cotton fabrics in iron boilers ensures higher productivity, reduces the bleaching time, saves space and gives a higher output per square meter of space, decreases losses in chemicals and processing materials, and improves the dyeing and printing properties of the fabric.

BLEACHING PROBLEMS IN THE TEXTILE INDUSTRY. B. K. Easton (Food Machy. & Chem. Corp.). Can. Textile J. 77: 39-42 (Mar. 18, 1960). (1487)

The relationship of faults in cotton gray goods to problems in bleaching is demonstrated by means of actual cases.

CHEMICAL MODIFICATION OF TEXTILE FIBERS. A. J. Hall. Fibres and Plastics 21: 78-81 (Mar. 1960). (1488)

Recent developments in techniques for permanent pleating of wool (Si-Ro-Set), waterproofing textiles (cold curing silicone-alkyl titanate compositions), and for eliminating problems of static electricity are discussed. Photo, diagr, 12 refs.

DEVELOPMENTS IN WASHING AND BLEACHING MACHINERY: 1959-60. Dyer 123: 438-445 (Mar. 11, 1960). (1489)

CONTINUOUS SODIUM CHLORITE BLEACHING RANGE. Kyoto Machy. Co. Ltd. J. Textile Machy. Soc. Japan 5: 77-78 (Dec. 1959). (1490)

Features are described and some production data given. Diagrs.

PREPARATION AND BLEACHING. PART 10. NEWER FORMULATIONS. K. S. Campbell (N. C. State Coll. School of Textiles). Textile World 110: 85-87 (Mar. 1960). (1491)

New developments in nonsilicate bleaching, calcium-phosphate process, combinations of chlorine and peroxide, and chlorite-hypochlorite formulas are briefly reviewed, and methods of checking results are noted. Reprints of this refresher course are available from Textile World, 330 West 42 Street, New York 36, N. Y. at $1. 25 each for 1 to 15 copies; $1. 00 each for 16 to 30 copies; 75¢ each for over 30 copies.

EFFECT OF pH IN CHLORINATION OF WOOL. W. G. Pye & Co. Ltd. Dyer 123: 111 (Jan. 15, 1960). (1492)

The effects of pH on the mechanical properties of wool and on alkali solubility are noted.

STABILIZERS IN BLEACHING PROCESSES. PART 2. Textile Recorder 77: 89-91, 85 (Mar. 1960). (1493)

The stabilization of bleaching liquors in kier bleaching, hydrogen peroxide bleaching of rayon and wool, and hypochlorite bleaching of various textile materials is discussed. 10 refs.

CHEMICAL MODIFICATION OF COTTON. E. P. Frieser. SVF Fachorgan Textilveredlung 14, No. 11: 734-755 (1959). In German. Through BCIRA 40: 549 (1960). (1494)

Some new methods are described, including: esterification of cotton with p-toluene sulfochloride and other aromatic acid chlorides and with isocyanates; cyanoethylation; acetylation; treatment with tetrahydroxymethylenephosphonium chloride (THPC) and with bromoform polymers of triallyl phosphate (BAP); treatment with tris-(aziridinyl)-phosphine oxide (APO); esterification, etherification, carboxymethylation, and phosphorylation; treatment with ethylamine; aminoethylation and carbamidoethylation; treatment with activated olefin compounds or with thiolactones; periodate oxidation; treatment with β-propiolactone. The effects obtained by the different treatments are briefly outlined. 55 refs.

CARBONIZING OF WOOL. Fibres and Plastics 21: 74-75 (Mar. 1960). (1495)

The general principles of the carbonizing process are outlined, and the improvement possible by the use of nonionic surface active agents in the sulfuric acid bath is cited.

WOOL CARBONIZING AND BLEACHING MACHINERY. Fibres and Plastics 21: 76-77, 81 (Mar. 1960). (1496)

Recent improvements in bleaching and carbonizing plants are briefly noted. Photos.

HOW MUCH WILL PARTIALLY CARBOXYMETHYLATED (CM) COTTON COST? K. M. Decossas, O. J. McMillan, Jr., R. M. Reinhardt, and E. F. Pollard (So. Reg. Research Lab.). Textile Inds. 124: 90-93 (Mar. 1960). (1497)

Cost data are provided for use in considering the economic feasibility of producing CM cotton. These cost data are estimates for hypothetical plant operations developed from laboratory data. Estimated investment costs for new installations, and processing costs and their component parts are reported for the batch partial carboxymethylation of cotton yarn to yield a soluble product, and for the continuous partial carboxymethylation of cotton fabric to yield an insoluble product. Graphs, tables, 12 refs.

TEXYLON PERMANENT ANTI-ABRASION FINISH. N. Roper (Leicester Coll. Technol.). Hosiery Trade J. 67: 130-131, 133 (Feb. 1960). (1498)

Texylon is a complex silicone compound in liquid form which can be emulsified with water to be applied to textile materials. Its application and fabric properties are described.

ANTISTATIC AGENTS IN THE TEXTILE INDUSTRY. A. E. Henshall (Imp. Chem. Inds. Ltd). Can. Textile J. 77: 43-45 (Feb. 19, 1960). (1499)

Paper deals with control of static electrification, choice of antistatic agent, antistatic agents for polyamide, polyester and acrylic fibers, antistatic agents for use on rayon, antistatic lubricants for filament yarns, and antistatic agents for use in the woolen industry.

STUDIES ON TEXTILE FINISHING AGENTS. PART 9. COPOLYMER COMPOSITIONS IN THE EMULSION COPOLYMERIZATION OF ACRYLAMIDE AND ACRYLONITRILE. PART 10. INFLUENCE OF THE ADDITION OF PROTECTIVE COLLOIDS. PART 11. EFFECT OF MONOMER-POLYMER SOLUBILIZATION IN THE EMULSION COPOLYMERIZATION OF N-METHYLOLACRYLAMIDE. PART 12. EFFECT OF ESTER-GROUPS IN THE EMULSION COPOLYMERIZATION OF N-METHYLOLACRYLAMIDE AND ACRYLIC ESTERS. H. Kamogawa, R. Murase, and T. Sekiya. Bull. Textile Research Inst. (Japan) No. 50: 107-131 (1959). In Japanese (English summary). Through BCIRA 40: 365 (1960). (1500)

ACETOVINYL RESIN IN FABRIC FINISHING. G. Motta and L. Sampaoli. Tinctoria 56, No. 10: 446-448 (1959). In Italian. Through BCIRA 40: 366 (1960). (1501)

The characteristics of acetovinyl emulsions (trade names: Vinavil, Vinavilol) are outlined, and compositions (with directions for their application) are given to be used in various finishes (e.g. water-repellent, wash resistant, chintz, schreiner, crease resistant, antisoiling, antistatic, etc.).

SYNTHETIC RESIN FINISHES. P. B. Law. Textile J. Australia 34: 1267-1271 (Dec. 21, 1959). (1502)

The properties and uses of the newer emulsion polymers and copolymers for the finishing of textiles are considered, as well as wash and wear finishing of cottons with reactive resins and the modification of these finishes with the aid of surface resin polymers. Table, 4 refs.

TEXTILE FINISHING MATERIALS. Fibres and Plastics 21: 82-83 (Mar. 1960). (1503)

Among the new commercially available finishes described are: Mitin FF 400% mothproofing agent; Embatex dichlorophen rotproofing agent; Irgapyrol EB flameproofing agent; Fibrofix Conc, Tinopal, and Newtrell C bleaching agents; Chloregal D for wool chlorination; Calaroc EU cellulose resin finish; Newtrell P. E. N., Monopole sulfonated oils, Cithrol A, and Cithrol S. G. wetting agents; and Gyosin NH antisnag finish for nylon.

REVIEW OF THE POSSIBLE CHEMICAL TREATMENTS OF CELLULOSE FIBERS. H. Beiertz. Z. ges. Textil-Ind. 61, No. 24: 1008-1013 (1959). In German. Through BCIRA 40: 541 (1960). (1504)

In this review, the author discusses the effects obtained by alkaline and acid treatments, as well as by mechanical treatments; the properties of assistants facilitating wetting (cresol-containing and cresol-free mercerizing agents, acid-resistant wetting agents); testing methods (for determining the luster baryta number, NaOH, and Na_2CO_3 contents in mercerizing liquors; the iodine test for differentiating between mercerized and unmercerized cotton), and sources of defects.

FINISHING OF COTTON/SPUN RAYON BLENDS. E. Pieper. Rayonne et Fibres Synthet. 15, No. 11: 1263-1273 (1959). In French. Through BCIRA 40: 548 (1960). (1505)

Shrinkproofing, creaseproofing, waterproofing, and stiffening finishes are reviewed, and reference is also made to bleaching and drycleaning of cotton/spun rayon fabrics.

Dyeing and printing D2

HEATS OF SOLUTION OF DYES IN WATER AND THE PROBLEM OF DYEING. S. M. Lipatov and I. M. Movshovich. Kolloid Z. 21, No. 5: 522-525 (1959). In Russian. Through BCIRA 40: 522 (1960). (1506)

It is shown that the heat content ΔH_0 and entropy ΔS_0 characterize better the ability of fiber and dye to react with each other than the value of the standard chemical potential $\Delta \mu_0$. The heat of solution of dyes was studied in dependence of temperature, and a relationship was established between the heat of solution and the ability of the dye to adsorb on the fiber.

EFFECT OF ORGANIC SOLVENTS ON THE STATE OF DIRECT DYES IN SOLUTION AND ON THEIR RATE OF DIFFUSION IN A CELLOPHANE FILM. B. N. Mel'nikov and P. V. Moryganov. Kolloid Z. 21, No. 5: 618-624 (1959). In Russian. Through BCIRA 40: 524 (1960). (1507)

The coefficients of free diffusion of 3 direct dyes were determined at 25° C in the presence, in the solution, of varying concentrations of pyridine, monoethanolamine, diethylamine, and polyvinyl pyrrolidone. Introduction into the dye liquor of organic solvents was found to lead to dispersion of the dye aggregates, the thickness of the solvatizing film forming around the dye molecules and, consequently, the particle size of the dye, increasing thereby with increasing solvent concentration. The changes caused by organic solvents in the aggregation state of the dyes affect also their diffusion in a cellophane film, the diffusion coefficients increasing on the average 3-5 times (in some cases 11-25 times).

SUBSTANTIVITY AND AFFINITY. J. Wegmann. Textil-Rundschau 14, No. 11: 631-642 (1959). In German. Through BCIRA 40: 345 (1960). (1508)

It is shown on examples of direct, copper complex, vat, Naphthol, reactive, wool, and disperse dyes, that differentiation must be made between the terms substantivity (the ability of a dye or a textile assistant to adsorb from liquid medium on a textile substrate and fix itself on it) and affinity (the measure of the force with which a dye or textile assistant is retained on a textile substrate). The thermodynamic affinity is defined as the difference in free energy between the dye in solution and that on the fiber under equilibrium conditions. A classification of dyeings, based on the affinity forces, is given. 24 refs.

NOTE ON THE ASSOCIATION ENERGY OF DYE IONS IN AQUEOUS SOLUTION. H. Uedaira. Bull. Textile Research Inst. (Japan) No. 50: 85-87 (1959). In Japanese (English summary). Through BCIRA 40: 346 (1960). (1509)

Van der Waals energies of Thionine and Acridine Orange were calculated by Gurney's method.

GUIDE TO NEW DYES: 1959-60. Dyer 123: 400-404 (Mar. 11, 1960). (1510)

An alphabetical list of some new dyes, with brief notes on their properties as described by the makers, and with special reference to recently introduced ranges.

VAPOR PRESSURES AND HEATS OF SUBLIMATION OF SOME DISPERSE DYES. R. S. Bradley, C. L. Bird, and F. Jones. Trans. Faraday Soc. 56: 23-28 (Jan. 1960). (1511)

The vapor pressures, latent heats of sublimation and associated entropy changes for two 1-aminoanthraquinone derivatives and two 4-nitro-4'-aminoazobenzene derivatives have been found by an effusion method. These compounds have a vapor pressure of 10^{-4}-10^{-6}mm Hg over the temperature range 110-165° C. The heats of sublimation are discussed in terms of the molecular structure. Graphs, 12 refs.

REACTIVE DYES FOR NYLON. D. F. Scott and T. Vickerstaff (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 76: 104-114 (Feb. 1960). (1512)

The Procinyl dyes are disperse dyes and can be applied in an unreactive form under acid conditions, when they possess the level-dyeing properties of disperse dyes. When the bath is made mildly alkaline, reaction occurs between dye and fiber, and a fast, level dyeing is obtained. It has been found that these dyes react both with the amine end-groups and with the amide groups in the fiber, so difficulties associated with saturation of amine end-groups are not encountered. Graphs, tables, 17 refs.

LATEST PROGRESS IN THE FIELD OF CONTINUOUS DYEING OF WOOL AND ITS BLENDS WITH SYNTHETIC FIBERS. H. Ris, H. R. Hirsbrunner, A. Schaeuble, and C. Soiron. Teintex 24, No. 11: 755-785 (1959). In French. Through BCIRA 40: 783 (1960). (1513)

The individual stages of the new Irga-pad method for dyeing pure wool and wool/polyester fabrics are described and the possibility of applying this process in dyeing wool/polyamide textiles is investigated. Practical examples are given.

NEW DYES FOR PLASTICS AND FIBERS. Fibres and Plastics 21: 41-43 (Feb. 1960). (1514)

Among the innovations covered are: Freon solvent system for color coding Teflon; Ethypol nontoxic dyes for polyethylene packaging (Williams Ltd); Esterin dyes for polyester resins (Williams Ltd); Procinyl disperse dyes (Imp. Chem. Inds. Ltd); Calcoloid vat dye which does not require chlorine or nitrous acid development (Am. Cyanamid Co.).

DYES AND THEIR APPLICATION: PROBLEMS OF MODERN TEXTILE COLORING. A. J. Hall. Fibres and Plastics 21: 37-40, 53 (Feb. 1960). (1515)

The factors which have influenced the development of dyes are noted, and methods of dye application of particular technical interest, together with probable future developments, are reviewed. Photos.

A CENTURY OF SYNTHETIC DYES FOR CELLULOSIC FIBERS. S. Coffey (Imp. Chem. Inds. Ltd). Chem. & Ind. No. 6: 132-138 (Feb. 6, 1960). (1516)

A review.

ORLON CANTRECE: DU PONT'S NEWEST SWEATER FIBER. H. T. Pratt (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 49: 190-192 (Mar. 21, 1960). (1517)

Following a discussion of the physical and dyeing properties of Orlon Cantrece filament, piece and package dyeing procedures are described.

PRACTICALITY OF DYEING BLENDS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1960. 4 p. Bull. X-116 (replaces Bull. X-100). Free. (1518)

A survey of the types of dyeing that can and cannot be applied to blend yarns and fabrics containing Du Pont fibers. Discusses union-dyeing, cross-dyeing, and techniques where one blend component is reserved while the other is dyed.

PRINCIPLES OF PADDING WITH PIGMENTS. R. Kern. Melliand Textilber. 40, No. 12: 1439-1443 (1959). In German. Through BCIRA 40: 523 (1960). (1519)

The problems arising during dyeing of cellulosic material with vat dyes are discussed, with special reference to the use of these dyes in pigment form. A better and deeper coloration was obtained by squeezing the material before padding.

FORMATION OF DYES ON WOOL. A. I. Levchenko. Tekhnol. Tekstil. Prom. No. 4(11): 121-126 (1959). In Russian. Through BCIRA 40: 361 (1960). (1520)

It is shown that oxidative dyeing of wool can be applied in practice, the dye being formed on the fiber from intermediate products. Fast azo dyes can be produced on the fiber by combining oxidation products of dioxynaphthalenes with azoamines.

BROADLOOM CARPET PRINTER. Brit. Tufting Machy. Ltd. Dyer 123: 233-234 (Feb. 12, 1960). (1521)

The operation of the machine is briefly described. Photos.

DYEING OF WOLCRYLON. PART 4. H. Petzold. Deut. Textiltech. 9, No. 11: 602-604 (1959). In German. Through BCIRA 40: 360 (1960). (1522)

Practical experiences in dyeing Wolcrylon IV (a further development of Wolcrylon II, produced in 1959 by the wet-spinning method) by the cuprous-ion method and dispersed dyes are discussed. Suitable dyeing techniques, dye selections, and compositions for dyeing knitted fabrics are recommended.

OBSERVATIONS AND EXPERIENCES DURING DYEING OF POLYACRYLONITRILE FIBERS. A Würz. Melliand Textilber. 40, No. 12: 1433-1438 (1959). In German. Through BCIRA 40: 528 (1960). (1523)

On the basis of a 2-years' experience with Basacryl dyes, which were developed particularly for fast dyeing of polyacrylonitrile fibers, the author discusses the principles according to which the dyes were selected, the assistants used, preliminary washing of the fibers to remove spinning oils and impurities, dissolution of Basacryl dyes, the dyeing process, leveling of nonuniform dyeings, special points to be observed during dyeing of high bulk yarns, dyeing of acrylonitrile/wool or cellulose blends, drying, and weak points of the Basacryl assortment.

CONTRIBUTION TO THE DYEING OF POLYESTER FIBERS. P. Villinger. SVF Fachorgan Textilveredlung 14, No. 11: 722-727 (1959). In German. Through BCIRA 40: 527 (1960). (1524)

A special dye assortment for dyeing polyester fibers was developed by Sandoz AG, Basle under the tradename of Foron dyes. These ultradisperse dyes (0.5-1μ) are claimed to ensure improved leveling power, good penetration into the fiber, uniform dyeing in winch-backs and machines, and interference-free circulation of the liquor. The dyeing method with Foron dyes (washing, bleaching, fixing, dyeing) is described and directions are also given for dyeing mixed fabrics (polyester/cotton or viscose rayon) and finishing operations for piece goods.

NEW DEVELOPMENTS IN DYE CHEMISTRY. PART 2. BEHAVIOR OF REMAZOL DYES DURING DYEING BY THE EXHAUSTION METHOD. H.-U. von der Eltz and F. Osterloh. Melliand Textilber. 40, No. 12: 1443-1448 (1959). In German. Through BCIRA 40: 525 (1960). (1525)

According to the chemical relationships explained in the previous article (abstr. 2415/59), the use of Remazol dyes is based on the principle of vinyl sulfone addition. In this part, various factors (alkali, temperature and time of dyeing, type and quantity of salt, liquor ratio in the case of cellulose fibers) affecting the behavior of Remazol dyes during dyeing by the exhaustio method of well-desized material with good absorbability are investigated in greater detail. There are now 10 Remazol dyes.

PROCION/SOLEDON COMBINATIONS FOR YELLOW-GREEN SHADES ON COTTON AND VISCOSE. Imp. Chem. Inds. Ltd. Textile Weekly 59(2): 1292, 1295 (Dec. 4, 1959). (1526)

The application technique consists of the simultaneous application of both dyes from the same bath, then fixation of the Procion component, followed by development of the Soledon component in a fresh bath, and dyeing can be carried out batchwise, semi-continuously, or continuously.

DYEING OF KAPRON FABRICS BY THE CONTINUOUS METHOD AT A HIGH TEMPERATURE. E. I. Martsinkonene and A. I. Vaydakavichyus. Tekstil. Prom. 19, No. 9: 46-48 (1959). In Russian. Through BCIRA 40: 356 (1960). (1527)

Kapron fabric can be successfully dyed in light and medium shades by the continuous method in the stabilized infrared installation with direct, acid, disperse, and other dyes. Disperse dyes are used to obtain brighter and faster colors. Results of experiments are given in 3 tables.

STUDIES ON DIRECT DYEING OF VISCOSE IN POLYMER SOLUTION. PART 1. DIRECT DYEING IN POLYMER-ELECTROLYTE SOLUTION. PART 2. DIRECT DYEING IN STARCH AND CARBOXYMETHYL STARCH SOLUTION. Y. Suda and T. Shirota. Bull. Textile Research Inst. (Japan) No. 50: 69-84 (1959). In Japanese (English summary). Through BCIRA 40: 354 (1960). (1528)

Dyeing of viscose rayon staple with Direct Scarlet B and Chrysophenine G in the presence of sodium alginate and sodium carboxymethyl cellulose was studied. The effects of nonelectrolyte and electrolyte on the equilibrium adsorption and diffusion coefficient of the dye in the fiber are discussed.

RATE OF DYEING OF VISCOSE RAYON WITH DIRECT DYES. K. Ishino and H. Saito. Bull. Textile Research Inst. (Japan) No. 50: 101-106 (1959). In Japanese (English summary). Through BCIRA 40: 353 (1960). (1529)

Rate-of-dyeing curves have been determined for Sirius Pink 2B, Sirius Supra Red 4BL, Benzo Scarlet GS, and Sirius Red 4B at various temperatures, and velocity coefficients and activation energies calculated.

DEVELOPMENTS IN DYEING AND DYES: 1959-60. J. L. Ashworth (Courtaulds Ltd). Dyer 123: 396-399 (Mar. 11, 1960). (1530)

PROBLEM OF DYEING SYNTHETIC FIBERS. PART 5. DYEING OF SYNTHETIC NITRON POLYACRYLONITRILE FIBER WITH VAT DYES. A. A. Kharkharov and V. F. Androsov. Tekhnol. Tekstil. Prom. No. 4(11): 115-120 (1959). In Russian. Through BCIRA 40: 359 (1960). (1531)

Experimental data confirm the assumption that dyeing of Nitron with vat dyes proceeds in a manner similar to the dyeing of cellulosic fibers with direct dyes. The method is described, and it is shown that the color intensity and fastness of the dye on fibers dyed in the wet state and on fibers dried at 60 and 80° before dyeing are practically the same.

RECENT ADVANCES IN THE TECHNOLOGY OF DYEING BLENDS CONTAINING DACRON POLYESTER FIBER. P. L. Meunier, R. J. Thomas, and J. C. Hoscheit (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 49: 153-158 (Mar. 7, 1960). (1532)

Piece dyeing of blends containing Dacron Type 54 and the new Dacron Type 64 with wool, rayon, and Orlon is discussed. Emphasis is placed on improved methods of dyeing, and the effects of dyeing rate, dyeing temperature, carrier selection, and choice of dyes on quality and cost. The effect of preheat setting on dyeability of typical disperse dyes is shown for a range of preheating temperatures. Graph, tables, 10 refs.

FAST TURQUOISE BLUES ON COTTON. Imp. Chem. Inds. Ltd. Textile Weekly 60 (1): 382, 385 (Feb. 12, 1960). (1533)

A modified procedure for jig dyeing cotton with Procion Brilliant Blue H7GS, which eliminates the problem of specky dyeing, is described.

HOW TO COLOR POLYESTER FIBER. F. F. Jacobs (Putnam Chem. Corp.). Modern Textiles Mag. 41: 32, 34 (Mar. 1960). (1534)

Practical recommendations for dyeing polyester fibers and their blends.

DYEING AND FINISHING SPECIAL BLENDS OF ARNEL WITH ACRYLICS AND ARNEL WITH COTTON IN CIRCULAR KNIT APPLICATION. PART 2. R. E. Lacy and J. A. Dayvault (Celanese Fibers Co.). Am. Dyestuff Reptr. 49: 119-121 (Feb. 22, 1960). (1535)

Practical aspects of dyeing and finishing Arnel/Orlon and Arnel/Acrilan are discussed, and recommended procedures are outlined. Tables.

DYEING AND FINISHING SPECIAL BLENDS OF ARNEL WITH ACRYLICS AND ARNEL WITH COTTON IN CIRCULAR KNIT APPLICATION. PART 3. R. E. Lacy and J. A. Dayvault (Celanese Fibers Co.). Am. Dyestuff Reptr. 49: 150-152 (Mar. 7, 1960). (1536)

Practical dyeing and finishing procedures for Arnel/cotton knit fabrics are described. Tables, 9 refs.

VAPOR-PHASE DYEING WITH DISPERSE DYES. C. L. Bird, F. Jones, and R. S. Bradley (Leeds Univ.). (Letter to the editor). J. Soc. Dyers Colourists 76: 114 (Feb. 1960). (1537)

RATE-OF-DYEING EQUATIONS FOR THE FINITE DYE BATH. PART 1. DERIVATION OF RATE-OF-DYEING EQUATIONS AT A CONSTANT TEMPERATURE. K. Tsuda. PART 2. RATE-OF-DYEING EQUATION WITH RAISING OF TEMPERATURE. K. Tsuda and F. Tsuiki. Bull. Textile Research Inst. (Japan) No. 50: 89-99 (1959). In Japanese (English summary). Through BCIRA 40: 357 (1960). (1538)

Calculated curves are compared with experimental values obtained by dyeing nylon 6 yarns with disperse dyes.

CAKE DYEING WITH REACTIVE DYES. T. Flanagan (Brit. Enka Ltd). Man-Made Textiles 37: 67-69 (Mar. 1960). (1539)

The factors affecting the dyeing properties of the Procion dyes are examined, and optimum conditions for the application of cold dyeing Procion dyes are given. Photo, graphs.

VACUUM-DYEING APPARATUS VACT-50. N. D. Il'yashuk. Tekstil. Prom. 19, No. 10: 57-59 (1959). In Russian. Through BCIRA 40: 362 (1960). (1540)

Vacuum-dyeing of stockings and other finished articles is described, and the apparatus illustrated. The author claims that this method shortens the dyeing time from 180 to 70-80 min and improves the dyeing quality. The steam consumption is reduced by 85.7%, that of the dye by 20%, and that of the wetting agent by 80%.

VAT DYEING OF COTTON FABRIC BY PIGMENTATION METHODS. M. R. Fox and J. F. Mawson (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 76: 73-77 (Feb. 1960). (1541)

A brief survey of practical vat pigment padding procedures is supplemented with data on the physical properties of suitable dyes. The effect of particle size on rate of reduction is discussed in relation to its practical implications, as well as factors such as color yield, dispersion stability, and migration effects during drying. The use of a new organic polyelectrolyte as a migration inhibitor is described. Photos, tables, 9 refs.

DYEING WOOLEN AND SYNTHETIC FIBERS: MACHINE MAKER'S POINT OF VIEW. K. Limbert (Longclose Eng. Co. Ltd). Dyer 123: 121-128 (Jan. 15, 1960). (1542)

Developments in dyeing machines for raw stock, yarns, tops, and piece goods are briefly reviewed.

HORSFALL PROPORTIONING APPARATUS FOR PADDING OF REACTIVE DYES. Horsfall Eng. Co. Ltd. Dyer 123: 293-295 (Feb. 26, 1960). (1543)

The operation and construction of the machine is described. Photos, diagr.

REDUCING MOIRE IN BEAM DYED TRICOT OF DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Mar. 1960. 1 p. Bull. N-126 (replaces Bull. N-67). Free. (1544)

A method for wrapping beam cores to prevent moiré in nylon tricot dyed to deep shades at high temperatures.

YARN DYEING WITH REACTIVE DYES. J. A. Fowler. Textile Merc. 141: 810, 817 (Dec. 18, 1959). (1545)

APPLICATION OF REACTIVE AND DIRECT DYES TO RAYON STAPLE BY CONTINUOUS METHODS. R. C. Cheetham (Courtaulds Ltd). J. Soc. Dyers Colourists 76: 95-103 (Feb. 1960). (1546)

The principles of continuous piece dyeing have been studied, and an investigation has been made into the possible application of these principles to viscose staple fiber, with particular reference to dyeing for the carpet trade, where large weights to a color are often called for. Development work has resulted in one continuous dyeing system based on the Fleissner revolving drum principle. An alternative dyeing system based on the Callaghan machine for bonded nonwoven fabrics is also being developed, and attention has been given to the possibility of using scouring bowls. Photo, diagrs, graphs, tables, 11 refs.

DEVELOPMENTS IN PRINTING MACHINERY: 1959-60. Dyer 123: 459 (Mar. 11, 1960). (1547)

ABILITY OF DYED FABRIC TO TRANSMIT ULTRAVIOLET RAYS. V. P. Tsvelodub. Tekstil. Prom. 19, No. 11: 63-65 (1959). In Russian. Through BCIRA 40: 825 (1960). (1548)

Experiments on fabrics dyed with direct dyes showed that, contrary to literature data, there is no direct relationship between the color of the dye and the permeability of the fabric to ultraviolet light.

DYEING MECHANISMS AND MOLECULAR SHAPE. H. Zollinger (Univ. Basle, Switzerland). Am. Dyestuff Reptr. 49: 142-149 (Mar. 7, 1960). (1549)

Examples are given to show the relationships between the shape of the molecules involved and the fastness of dyeings, substantivity of dyes, and the adsorption mechanism of reactive dyes. 23 refs.

BEAM DYEING TRICOT FABRIC. K. S. Laurie (John Dalglish & Sons Ltd). Dyer 123: 326-327 (Feb. 26, 1960). (1550)

An example is given to illustrate the procedure used in dyeing nylon tricot with disperse acetate dyes.

MIGRATION OF NONSUBSTANTIVE DYES ON FABRICS AND ITS RELATION TO SATURATION REGAIN AND FIBER SURFACE STRUCTURE. D. Wilson (Courtaulds Ltd). J. Soc. Dyers Colourists 76: 84-94 (Feb. 1960). (1551)

The migration of nonsubstantive dyes on fabrics woven from a range of fibers was studied at room temperature and the regains below which migration does not occur, i.e. the critical regains, determined. For most fibers the critical regain is just below the imbibition value and is independent of the dye used to determine it. However, this is not so for viscose rayon, where the critical regain depends on the molecular size of the dye. This effect is caused by the presence of small continuous channels in the surface of viscose rayon fibers, which are flooded and can therefore transport dye at humidities less than saturation. Diagrs, graphs, tables, 26 refs.

PHTHALOCYANINE DYE PRINTING PROBLEMS. W. Ingamells (Imp. Chem. Inds. Ltd). Dyer 123: 235 (Feb. 12, 1960). (1552)

The poor fastness of phthalocyanine prints on viscose is attributed to lack of penetration, and it is suggested that penetration can be achieved by increasing the number of solubilizing groups per molecule.

PROCESS FOR PRINTING CELLULOSE TRIACETATE. Silk Rayon Inds. India 2: 13-14 (Dec. 1959). (1553)

Printing with disperse dyes where the operation of steaming can be carried out at atmospheric pressure by a continuous process.

NEW HORIZONS FOR PIGMENT PRINTING. N. S. Cassel (Interchemical Corp.). Am. Dyestuff Reptr. 49: 184-189 (Mar. 21, 1960). (1554)

The principles underlying the use of emulsions in pigment printing and the basic molecular relationships of the materials involved are discussed. Photomicrographs.

COLOR MATCHING AND CONTROL INSTRUMENTS: 1959-60. Dyer 123: 435-437 (Mar. 11, 1960). (1555)

COLOR MATCHING IN THE WORSTED INDUSTRY. Textile Recorder 77: 82-83, 85 (Mar. 1960). (1556)

Various aspects of the work connected with color matching are described, and suggestions for improving the standards and creating a more imaginative approach on the part of the color matcher to assist the cloth designer are given. Photos.

STUDY OF THE PROPERTIES OF THICKENERS AND PRINTING PIGMENTS. PART 1. F. I. Sadov and S. M. Khen. Tekhnol. Tekstil. Prom. No. 5(12): 111-116 (1959). In Russian. Through BCIRA 40: 784 (1960). (1557)

Several devices for determining the viscosity of thickeners and printing pigments were tested, and a method for its determination was developed to study the effects of temperature and thickener concentration on the viscosity of tragacanth, starch, and dextrin thickeners, as well as on printing pastes containing them. It was found that, by mixing starch and dextrin, the viscosity of the thickener decreases as compared with that of the individual substances.

WORK STUDY IN DYE HOUSES. G. C. Battye. Textile Mfr. 86: 75-76 (Feb. 1960). (1558)

TINTS FOR FILAMENT DACRON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Feb. 1960. 2 p. Bull. D-117 (replaces Bull. D-74). Free. (1559)

This bulletin discusses recommended tints to be used in the manufacture of fabrics from 100% Dacron filament yarns.

PRINTING OF ACRYLIC FIBERS. Imp. Chem. Inds. Ltd. Textile Weekly 60(1): 203, 206 (Jan. 22, 1960). (1560)

General recipes for printing with vat, disperse, and basic dyes, as well as data on their lightfastness, washfastness, and steam pleating behavior, are given.

Drying, setting, conditioning D4

STOCKING POSTBOARDING VERSUS PREBOARDING. Bennett Bros. Ltd. Hosiery Trade J. 67: 144-145 (Feb. 1960). (1561)

As a result of a work study investigation it has been possible to reduce the total number of operations performed from seven under conditions of preboarding to four with postboarding.

TROCKENTECHNIK TENTER. Trockentechnik Kurt Bruckner KG. Textile Merc. 141: 751, 753 (Dec. 4, 1959). (1562)

The tenter utilizes the floating fabric method in which the fabric is suspended between opposing air streams emanating from upper and lower sets of single nozzles.

SPOONER PIN TENTER WITH FULTON GUIDERS. Spooner Dryer & Eng. Co. Ltd. Dyer 122: 736-737 (Dec. 4, 1959). Textile Merc. 141: 689-690 (Nov. 20, 1959). (1563)

Features of tenter are described. Photos.

CONTACT DRYING IN THE TEXTILE INDUSTRY. V. P. Samoilov and Y. G. Ershov. Tekhnol. Tekstil. Prom. No. 4(11): 133-140 (1959). In Russian. Through BCIRA 40: 370 (1960). (1564)

Studies dealing with contact drying of textiles are reviewed, and experiments carried out under laboratory conditions are reported.

DETERMINATION OF DYE COMPOSITIONS BY SPECTROPHOTOMETRIC METHODS. M. V. Parysheva. Tekstil. Prom. 19, No. 9: 44-46 (1959). In Russian. Through BCIRA 40: 352 (1960). (1565)

Three acid dyes, Anthraquinone Blue, Light Fast Yellow and Bright Red, have been applied to gray cotton fabric in the experimental vat (1% concentration) and the characteristics for each dye have been determined spectrophotometrically. This method has been found applicable in determining dye compositions with known extinction coefficients. Spectra of some dyes are tabulated.

OPTIMUM HEAT SETTING FOR NEW GEOMETRICAL STRUCTURE OF THERMOPLASTIC YARNS. S. Asao and K. Sakaoku. J. Textile Machy. Soc. Japan 12, No. 11: 21-28 (1959). In Japanese (English summary). Through BCIRA 40: 302 (1960). (1566)

Optimum conditions for heat setting nylon 6, Terylene, Tetron, and Saran to give a coil-shaped structure (polygonal or circular cross-section and arbitrary pitch) are tabulated.

CONSTRUCTIONAL PRINCIPLES OF THE DRYING MACHINE SKB-6. M. F. Yazychkov. Tekstil. Prom. 19, No. 11: 52-55 (1959). In Russian. Through BCIRA 40: 793 (1960). (1567)

A more detailed description and illustration are given of the machine SKB-6 already reported (see abstr. 599/60). Experimental results are tabulated.

TESTING AND MEASUREMENT E

IS IT POSSIBLE TO DRY THE SAMPLE COMPLETELY IN THE CONDITIONING OVEN? F. Tobisch. Melliand Textilber. 40, No. 12: 1379-1381 (1959). In German. Through BCIRA 40: 563 (1960). (1568)

It is shown that complete drying of textiles in air heated to 105-110° C (specified standard temperature in a conditioning device) is not possible, that the extent of drying (equilibrium state) differs correspondingly to the end condition of the air used for drying, and that, theoretically, complete drying can be attained only if the air is heated and simultaneously dried by means of a water-removing agent. The residual moisture in the bone-dry sample amounts to 0.5-1.5%.

ELECTRONICS IN THE TEXTILE INDUSTRY. H. Mahlo. Rayonne et Fibres Synthet. 15, No. 11: 1207-1224 (1959). In French. Through BCIRA 40: 559 (1960). (1569)

Electronic devices for the measurement of speed, elongation, and humidity (in size boxes and dryers), for the synchronization of the speed of two machines, and for the control of weft threads (Orthomat) are described and illustrated.

CHEMICAL ANALYSIS OF BLENDS OF DACRON POLYESTER FIBER WITH COTTON OR RAYON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Feb. 1960. 2 p. Bull. D-118 (replaces Bull. D-93). Free. (1570)

The chemical analysis and calculation of fiber content on an oven dry and commercial moisture regain basis are given.

WAXED RECORDING PAPER: NEW DIAGRAM PAPER FOR TEXTILE TESTING DEVICES. H. Rothe. Faserforsch. u. Textiltech. 10, No. 10: 496 (1959). In German. Through BCIRA 40: 560 (1960). (1571)

The use of a diagram paper, usually dyed red in the mass and coated on one side with a thin layer of wax so that this side appears pale-pink, is recommended to eliminate the disadvantages of ink. This paper is supplied by the producers on rolls with the usual perforation and the desired print on the wax-coated side. The red ground becomes visible when writing with a pointed steel needle (gramophone needle); the curves can be very close to each other to be still distinguishable and the diagrams can be evaluated by using a magnifying glass.

Fibers E1

RESISTANCE TO AIRFLOW OF DIFFERENT FIBERS. S. L. Anderson and G. E. Settle. Ann. Sci. Textiles Belges No. 3: 7-10 (Sept. 1959). In French. Through BCIRA 40: 567 (1960). (1572)

Experiments carried out by means of an apparatus described previously show that, for a given diameter, the resistance to airflow of a wool, nylon, Terylene, or metal wire filament or fiber is practically equal within a range of 16-48 microns.

APPARATUS FOR MEASURING FIBER CRIMP. G. Navarre. Rayonne et Fibres Synthet. 15, No. 11: 1278-1280 (1959). In French. Through BCIRA 40: 562 (1960). (1573)

The Fabelta crimp meter is described and illustrated. It is claimed to eliminate the disadvantages of other devices and to give reproducible values by suppressing the effects of fiber tensioning and the errors in the length readings.

HOW TO DETERMINE THE pH VALUE OF FIBROUS MATERIAL. A. Agster. Melliand Textilber. 40, No. 12: 1448-1451 (1959). In German. Through BCIRA 40: 565 (1960). (1574)

On comparing the most important methods for determining the pH values of fibers it was found that the values can differ considerably from each other according to the method used (measurement by pressing on indicator paper, measurement of the aqueous extract by means of indicator paper or electrometrically, measurement by means of the contact electrode). The results obtained by the standard method (extraction of the fibers at a liquor ratio 1:50 and measuring the pH with the glass electrode) are uniform and the reproducibility is good but, in the pH ranges important for fiber tendering, the values are erroneous on account of the high dilution during extraction. This dilution error can be eliminated by the extrapolation method proposed.

COMPARISON OF VARIOUS METHODS FOR THE EVALUATION OF COTTON PROPERTIES. A. N. Solov'ev. Tekhnol. Tekstil. Prom. No. 5 (12): 26-35 (1959). In Russian. Through BCIRA 40: 802 (1960). (1575)

The principles of American methods for determining the length, strength, and fineness of cotton fibers are reviewed (without describing the methods in detail), and the American standard tests are compared with those used in the Soviet Central Research Institute of the Cotton Industry.

BUNDLE STRENGTH OF COTTON FIBERS. J. Krejci. Textil 14, No. 11: 416-419 (1959). In Czech. Through BCIRA 40: 569 (1960). (1576)

Laboratory results from various types of bundle-strength testers are compared with those of the Schopper tester for determining the strength of single fibers. The data are tabulated.

RAW COTTON FIBER PROPERTIES: SCIENTIFIC ASSESSMENT. E. Lord (Brit. Cotton Ind. Research Assoc.). Textile Weekly 59 (2): 505-507 (Sept. 18, 1959); 576-580 (Sept. 25, 1959). (1577)

Part 4. Trash content. Commercial classification and grading. Part 5. Classification. For previous parts, see abstr. 3423/59.

QUANTITATIVE SEPARATION OF WOOL AND REGENERATED CELLULOSE FIBERS BY SODIUM HYPOCHLORITE. PART 2. M. Kehren and C. Maurer. Z. ges. Textil-Ind. 62, No. 1: 19-22 (1960). In German. Through BCIRA 40: 810 (1960). (1578)

Comparative experiments have confirmed the suitability of the sodium hypochlorite method proposed by Druce (TTD 13: 315/56) for the quantitative separation of wool and cellulose hydrate fibers. The amount of hypochlorite solution required for the complete destruction of wool must be adjusted to the weight of the sample (a 3 g sample is recommended). The preparation and pretreatment of the sample are described. No explanation was found for the greater weight loss of the pure cellulose hydrate fiber in the blank test with N hypochlorite solution determined by the authors (0.7-0.8%) as compared with that obtained in other countries (0.2-0.3%). For Part 1 see abstr. 513/59.

DEVICE FOR DETERMINING THE CRIMP OF SYNTHETIC FIBERS. L. A. Luvishis. Tekstil. Prom. 19, No. 11: 65-66 (1959). In Russian. Through BCIRA 40: 804 (1960). (1579)

A device for testing the stability and crimp of Kapron fiber is described, and values obtained are compared with those given by merino wool.

Yarns E2

UP-TO-DATE AND PRACTICAL YARN TESTING. H. Schumacher. Textil-Praxis 14, No. 9: 895-900 (1959). In German. Through BCIRA 39: 4860 (1959). (1580)

Some examples are given of the application of collective tests with the Schumacher harp strength tester.

QUICK WAY TO MAKE NEP COUNTS. E. R. Beckner. Textile World 110: 60 (Mar. 1960). (1581)

A modification of the N. C. State College template system consists of counting holes containing one or more neps instead of counting individual neps. A conversion table is given.

CHECKWEIGHING YARN. A. Linnert (Brit. Cotton Ind. Research Assoc.). Textile Weekly 60 (1): 371-372, 377 (Feb. 12, 1960). (1582)

The advantages of checkweighing and cop sorting condenser spun yarns into groups of limited count range are cited. Photo.

IMPACT TESTING OF YARNS AND CORDS. E. V. Reeves (Courtaulds Ltd). Textile Weekly 60 (1): 133-134, 137-138 (Jan. 15, 1960). (1583)

The ballistic pendulum, flywheel impact, and projectile tests are briefly described, and test results for several rayon, nylon, and Terylene tire cords are tabulated. Diagrs, graph, table, 5 refs.

TWIST MEASUREMENT IN COTTON YARN. W. F. Du Bois and D. F. Van de Riet. Rev. Textilis 15, No. 10: 13-16; No. 11: 35-48 (1959). In Dutch. Through BCIRA 40: 409 (1960). (1584)

Methods described in the literature for measuring yarn twist are reviewed (e.g. the direct method, the methods of Marschik and Theodorescu, the untwisting-retwisting method, and the counterproof method). The apparatus (modified Defraine twist meter) used by the authors to study the factors causing variations in the measuring results is described. Diagrams are given showing the effect of load on elongation and twist.

NEW METHOD OF MEASURING WARP TENSION AND LETTING-OFF LENGTH PER PICK EXPLAINED WITH EXAMPLES. K. Sakamoto and H. Kamogawa. J. Textile Machy. Soc. Japan 5: 50-56 (Dec. 1959). (1585)

A method is described for measuring warp letting-off length per pick and a study made of whether this method can be practically used on the negative and positive let-off motion devices invented by one of the authors. A quantitative experimental analysis was made of these devices with the new measuring method. Diagrs, graphs, table.

CALCULATION OF THE PACKAGE DIAMETER OF COPS ON RING SPINNING FRAMES. Y. Yamamoto. J. Textile Machy. Soc. Japan 12, No. 12: 5-11 (1959). In Japanese (English summary). Through BCIRA 40: 733 (1960). (1586)

Formulas are quoted for the average thickness of the yarn layer of the nth order and for the average package diameter having a yarn layer of the nth order (in terms of yarn diameter, ring-rail lift, yarn wound each lift, and bobbin diameter) which agree well with experimental results.

METHOD OF MEASURING THE PACKAGE DIAMETER OF A SLIVER BOBBIN ON A RUNNING FLYER FRAME. PART 2. T. Isshi, S. Kobayashi, and Y. Sasaki. J. Textile Machy. Soc. Japan 12, No. 12: 1-4 (1959). In Japanese (English summary). Through BCIRA 40: 732 (1960). (1587)

Light is cast from a lamp over the head of a flyer that has both a photocell fitted to its leg and a shutter plate fitted to the presser-weight on the cell. Variations in the photoelectric current during the revolution of the flyer are recorded by a microrecorder. See abstr. 3055/59 for Part 1.

THREAD TENSION METER FOR RAPID YARN BREAKING TESTS. Melliand Textilber. 40, No. 12: 1414 (1959). In German. Through BCIRA 40: 584 (1960). (1588)

The Schmidt thread tension meter DX described, available for various measuring ranges from 3 g to 10 kg, is an accurate device for rapid tensile-strength tests on yarns and sewing threads. The modified Schmidt warp-tension meter KX can be used for the same purpose.

YARN QUALITY FOR WEAVING: ASSESSMENT TECHNIQUES BASED ON SPINNER/WEAVER CO-OPERATION. J. Slack (Knowles Ltd). Textile Weekly 59 (2): 1212-1218, 1232 (Nov. 27, 1959). (1589)

The yarn characteristics of strength, levelness, cleanliness, elasticity, extensibility, plasticity, swellability, smoothness or hairiness, frictional properties, dielectric properties, absorption of liquids, and feel are discussed from the viewpoint of assessment and control by the spinner.

SYNOPSIS OF METHODS FOR MEASURING YARN IRREGULARITY. A. Barella. Industrie Textile: 753-756 (Nov. 1959). In French. Through BCIRA 40: 583 (1960). (1590)

Methods and devices for measuring yarn regularity are reviewed and tabulated (with reference to the year of development) on the following basis: visual examination; application of vibration and diffraction techniques; weighing of equal lengths; mechanical detection of irregularities (calibrating and scanning devices); optical and photographic techniques; thermoelectric and photoelectric devices; apparatus based on capacity variations; pneumatic and similar installations; radiations; devices based on variations in strength and elongation and on twist variations.

Fabrics E3

FATIGUE TESTING OF RAYON FABRICS WITH VARIOUS WEAVES AND WEFT DENSITIES. W. Wegener and H. Gendriesch. Z. ges. Textil-Ind. 62, No. 1: 8-15; No. 2: 39-42 (1960). In German. Through BCIRA 40: 828 (1960). (1591)

The new Wegener tester described is suitable for testing fabric samples according to the principle of constant elongation. The fabrics are examined in warp and weft direction to study their stress elongation behavior as a function of time, taking also into account the time-dependent residual elongation determined after relaxation. The effects of weave and of weft density on the dynamometric properties of fabrics are examined.

EVALUATION OF FABRIC TEAR STRENGTH BY THE AIR BURSTING METHOD. L. B. Potapova. Tekhnol. Tekstil. Prom. No. 5 (12): 36-46 (1959). In Russian. Through BCIRA 40: 823 (1960). (1592)

A method is described for evaluating the mechanical properties, from the tearing force determined on the air bursting tester, of fabrics (e.g. Kapron) subjected in practice to the stress of air or liquid flow. The apparatus described is provided with a device recording in a diagram the deflections of the pointer in dependence of the pressure exerted on the fabric.

NEW DEVELOPMENTS IN EVALUATING WASH-AND-WEAR PERFORMANCE. J. R. Bercaw (E. I. du Pont de Nemours & Co.). Am. Dyestuff Reptr. 49: 111-117 (Feb. 22, 1960). (1593)

Techniques have been developed for making and testing optimum small-scale fabric samples, which reliably predict wash-and-wear performance of their broad-woven analogs. A more fundamental problem, that of objectively measuring fabric wrinkles, has been solved by a new application of an established principle involving low-angle light projection. Photos, diagrs, graphs, tables, 6 refs.

METHODS OF TESTING TEXTILES: RECOVERY FROM CREASING. Can. Government Specifications Board. Can. Textile J. 77: 46-47 (Feb. 19, 1960). (1594)

This method, based on the angle of recovery, is intended to determine the ability of a fabric to recover from creasing such as might occur during normal wear. It does not necessarily reflect a fabric's resistance to creasing. Diagrs.

TEXTILES: DETERMINATION OF THE NONFIBROUS CONTENT IN FABRICS FROM COTTON AND SYNTHETIC FIBERS. Swiss Standards Assoc. Textil-Rundschau 15, No. 1: 31-32 (1960). In German. Through BCIRA 40: 829 (1960). (1595)

The Swiss standard specification SNV 98 741 contains the description of the method for the quantitative determination of nonfibrous materials in yarns or fabrics from cotton and its blends with other cellulosic fibers and with polyamide, polyester, and polyacrylonitrile fibers. The nonfibrous materials include all substances which can be removed with chloroform, water or enzymic desizing agents (not included are urea-formaldehyde condensates, substantive organic finishes, chloroform- and water-insoluble polymers and substances volatile at 110° C). The devices and reagents, the sample size, and number of tests are specified.

APPARATUS FOR MEASURING HEAT RETENTION OF FABRICS. J. Millet and R. Audibert. Bull. Inst. Textile France No. 83: 127-143 (Aug. 1959). In French. Through BCIRA 40: 420 (1960). (1596)

Various existing techniques of measuring the heat-retaining capacity of fabrics are reviewed, and a new apparatus is described, which is based on the principle of measuring the energy required for maintaining at a constant temperature a heat-measuring body covered with the fabric to be tested.

FINISHING OF TEXTILES WITH PRESERVING AND IMPREGNATING AGENTS. PART 3. THE SOIL BURIAL TEST: EVALUATION OF SOILS FROM DIFFERENT SOURCES. W. Hausam and R. Rupp. Melliand Textilber. 40, No. 12: 1465-1468 (1959). In German. Through BCIRA 40: 592 (1960). (1597)

Since neither the compost soil standardized in DIN 53933 nor garden soil gave representative results in soil burial tests for rotproofed fabrics (e.g. awning), a comparison was made between soils from different sources by determining their physical and biological properties and the behavior of rotproofed fabrics (decrease in breaking load) during the burial test. It was found that, provided a good water-insoluble rotproofing agent composition is used, the type of soil is immaterial as long as it is in a sufficiently porous state and has the required humidity.

Other E4

IDENTIFICATION OF TEXTILE COATINGS BY INFRARED SPECTROSCOPY. F. H. Forziati, R. T. Hite, and M. K. Wharton (Nat. Bur. Standards). Am. Dyestuff Reptr. 49: 103-107 (Feb. 22, 1960). (1598)

A method for the qualitative analysis of textile coatings is described in which small specimens of coated textiles are fractionated and the fractions identified by means of infrared spectroscopy. The method is also applicable to the identification of extractable textile finishes. Graphs, tables, 15 refs.

SOLUBILITY OF WOOL DYES: ITS ASSESSMENT AND PRACTICAL SIGNIFICANCE. W. Beal (Geigy Co. Ltd). J. Soc. Dyers Colourists 76: 78-83 (Feb. 1960). (1599)

The methods of testing the solubility of wool dyes at present in use are criticized, and a new method is suggested. This method takes into account such variables as liquor/goods ratio, temperature at which dyeing is commenced, the dyeing assistants used, the type of water, the depth of shade being dyed, and the method by which the dyebath is prepared. Graph, tables, 11 refs.

XENON ARC LAMP XE 1500 AS A RADIATION SOURCE FOR LIGHTFASTNESS TESTING. H. Toepffer (Cassella Farbwerke Mainkur AG). Translated by K. McLaren (Imp. Chem. Inds. Ltd) from original in Melliand Textilber. 39, No. 11: 1246-1251 (1958). Textile Merc. 141: 840-844, 856 (Dec. 25, 1959). (1600)

The Xeno test makes it possible to obtain results which correspond to a great extent to those obtained under practical conditions. Differences between daylight exposure and the Xeno test are due to the fact that, in the latter, the ultraviolet component is constant, whereas this component varies in daylight and is only partially effective behind window glass. The natural humidity conditions can be adjusted in the Xeno test. The possibility of carrying out weathering tests under the same light source is pointed out. Photos, graph, 4 refs.

DETERMINATION OF THE SURFACE TENSION OF LIQUIDS AND SOLUTIONS WITH LOW VISCOSITY FROM THE RISE IN CAPILLARIES. M. Rösch. Z. ges. Textil-Ind. 61, No. 24: 1006-1008 (1959). In German. Through BCIRA 40: 504 (1960). (1601)

The simple apparatus described ("Tensatester") can be used for determining the concentration of detergent and wetting agent solutions. Experiments are in progress to extend its applicability to used detergent solutions and continuous wash liquors. The difficulties encountered are due to the fact that the surface tension need not necessarily be proportional to the detergent power.

MILL MANAGEMENT F

IMPLICATIONS OF REEQUIPMENT. R. Hodara (Bur. Technique de Conseillers Industriels). Textile Weekly 60 (1): 607-613, 629 (Mar. 11, 1960). (1602)

REEQUIPMENT IN THE BRITISH COTTON INDUSTRY. Textile Merc. 140: 845-847, 857 (June 26, 1959); 141: 16, 18 (July 3, 1959); 45, 48-49 (July 10, 1959); 77-84 (July 17, 1959); 148-150 (July 31, 1959); 172-174, 183 (Aug. 7, 1959). (1603)

Part 4. Sizing and weft preparation machinery, by D. Brunnschweiler. Part 5. Rationalization in cotton weaving: problems facing the horizontal organization, by V. Duxbury. Part 6. Rationalization in cotton weaving: machine availability for reequipment, by V. Duxbury. Part 7. Problems facing the vertical organization, by A. Ormerod. Parts 8 and 9. Progress towards continuous workflow in dyeing and finishing, by A. J. Hall. For parts 1-3, see abstr. 2153/59 and 2530/59. Photos, diagrs.

Industrial engineering F1

HEAT AND POWER EFFICIENCY IN TEXTILE MILLS. R. A. Johnson. Textile Merc. 140: 355-359 (Mar. 13, 1959); 745-747 (June 5, 1959); 141: 142-145, 161 (July 31, 1959). (1604)

A series of articles describing the economies and improvements in operational efficiency achieved by British textile firms taking advantage of the technical and advisory facilities of the National Industrial Fuel Efficiency Service. Part 1. Introduction. Part 2. Fuel economy in the boiler house. Part 3. Cotton and coal.

PRESENT DECISIONS AND FUTURE PROSPECTS IN REEQUIPMENT: A REVIEW OF SOME OF THE FACTORS INVOLVED. C. H. Crabtree (Charles Crabtree Ltd). Textile Weekly 59 (2): 743-750 (Oct. 9, 1959); 818-822 (Oct. 16, 1959). (1605)

RECORD KEEPING FOR THE PLANT ENGINEER. R. E. Gladstone (Converse Rubber Co.). Am. Textile Reptr. 74: 14, 39-40 (Mar. 3, 1960). (1606)

Methods of minimizing paperwork involved in keeping records on plant equipment, work orders, and maintenance are described.

THE TEXTILE INDUSTRY SWINGS TO DATA PROCESSING. Management & Business Automation 3: 18-21, 48 (Mar. 1960). (1607)

Computer applications in the textile industry.

CONSIDERATIONS IN THE PURCHASE OF NEW MACHINERY. A. S. Wilcox. Textile Recorder 77: 68-70, 72, 77 (Mar. 1960). (1608)

This article considers four aspects of reequipment: product orientation and marketing; low operating costs; vulnerability to labor scarcity; and comparison of machine potentials. Diagr, graphs, table.

MILL CHECK-UP. PART 2. SUPERINTENDENT INSPECTS OPENING AND CLEANING. A. L. Landau. Textile World 110: 64, 172, 174 (Mar. 1960). (1609)

Pointers on checking conveyor pipes and magnets, vertical-opener grid bars and waste, condenser screens, and horizontal-opener beaters and grid bars are given.

A FORECASTING METHOD FOR MANAGEMENT OF SEASONAL STYLE-GOODS INVENTORIES. D. B. Hertz and K. H. Schaffir (Arthur Andersen & Co.). Operations Research 8: 45-52 (Jan./Feb. 1960). (1610)

Because of high obsolescence costs, optimum decisions on the amounts of highly seasonal, styled items to place into inventory in anticipation of customer orders hinge primarily on the probabilities of selling these amounts before the end of the season. In a study of the operations of a textile manufacturer, methods were developed for determining (based on sales data) the duration and timing of the selling seasons, and for forecasting total sales for the season for each individual item in the line, at different probability levels. From these, criteria for weekly re-evaluation of inventories are established. Graphs, 3 refs.

OCCUPATIONAL DEAFNESS AND ITS PREVENTION. L. Muller. Tex 18, No. 12: 1508-1513 (1959). In Dutch. Through BCIRA 40: 881 (1960). (1611)

The harmful effects of noise produced by certain machines, the possibilities of eliminating the sources, and protection of the worker against the effects of noise are discussed.

ARE YOU REDUCING COSTS SYSTEMATICALLY? J. L. Alexander (N.C. Finishing Co.). Textile Bull. 86: 46-48 (Mar. 1960). (1612)

The organization and operation of a formalized cost reduction program to assist in reducing plant costs are described.

MULTIMACHINE ASSIGNMENTS. PART 5. HOW TO USE THE TABLES. T. F. O'Connor. Modern Textiles Mag. 41: 27, 30 (Mar. 1960). (1613)

The calculation and analysis of cycle time in multimachine attendance is demonstrated.

MATHEMATICS OF DOUBLE-DAY SHIFT WORKING. J. A. Scott (Hayeshaw Ltd). Textile Merc. 142: 174-175, 183 (Feb. 5, 1960). (1614)

A formula is derived for determining the level of activity required before the advantages of shift working overtake and pass the gains from single day shift working.

Plant and equipment F2

TEXTILE MILL MAINTENANCE. PART 3. F. H. Slade. Textile Mfr. 86: 3-8 (Jan. 1960). (1615)

Operation and maintenance of piping installations for steam, water or air, and of air compressors are discussed. Photos, diagrs.

VISUAL SYSTEM FOR SIMPLIFYING PLANT LAYOUT. L. G. Hall (Skefko Ball Bearing Co. Ltd). Textile Recorder 77: 76-77 (Mar. 1960). (1616)

The use of translucent materials for the visual presentation of plant layout is described. Diagr.

INTRODUCING A NEW INVENTION AS PART OF A MODERNIZATION POLICY. T. W. Walker. Textile Weekly 60 (1): 190, 192-194 (Jan. 22, 1960). (1617)

A detailed account of the introduction of the Shirley drafting system at a mill, from the time of the early trials just after the war, to the successful conversion and application to 68 ring spinning frames up to the present time, is used as a concrete example illustrating the method of introducing a new process successfully.

CENTRALIZED LUBRICATION. Textile Bull. 86: 67-70 (Mar. 1960). (1618)

Centralized lubrication systems minimize or eliminate all manual lubrication errors by making lubricant application an operating function of the machine. The applicability of such a system to shuttleless and conventional looms, twisters, and cards is briefly discussed. Diagrs.

TEXTILE MACHINERY DEVELOPMENTS IN 1959. Textile Weekly 59 (2): 1411-1419 (Dec. 18, 1959). (1619)

SOLID LUBRICANTS IN THE TEXTILE INDUSTRY: APPLICATIONS OF MOLYBDENUM DISULFIDE. P. Kettlewell (Rocol Ltd). Textile Weekly 60 (1): 317-318 (Feb. 5, 1960). (1620)

SYNTHETIC RUBBER AND THE TEXTILE INDUSTRY. K. C. Smith (Dayton Rubber Co. Ltd). Textile Weekly 60 (1): 378, 381, 404 (Feb. 12, 1960). (1621)

Developments in the use of synthetic rubber for such uses as drafting aprons, roller cots, sizing rolls, and condenser rubbers and tapes are noted.

POWER TRANSMISSION IN INDUSTRY. PART 1. SHAFT-MOUNTED SPEED REDUCERS. G. A. Hayhurst (Wm. Kenyon & Sons Ltd). Textile Weekly 60 (1): 259-264 (Jan. 29, 1960). (1622)

Features and advantages are covered. Photos.

POWER TRANSMISSION IN INDUSTRY. PART 2. POSITIVE BELT DRIVE. A. Jacks (William Kenyon & Sons Ltd). Textile Weekly 60 (1): 321-322 (Feb. 5, 1960). (1623)

Features and advantages of the toothed Powergrip belt are noted. Photo.

SCIENCES G

Chemistry G1

POLYVINYL CHLORIDE FILM: APPLICATIONS IN BOOKBINDING. V. Bird. Fibres and Plastics 21: 51-53 (Feb. 1960). (1624)

Development of a high-frequency welding process has made possible a new method of bookbinding, using polyvinyl chloride film. The process is described together with the properties of polyvinyl chloride as a binding material, and its possible future developments.

ANALYSIS OF SURFACTANT MIXTURES. L. E. Weeks and J. T. Lewis (Monsanto Chem. Co.). J. Am. Oil Chemists Soc. 37: 138-142 (Mar. 1960). (1625)

A scheme is presented for the separation of active ingredients from built detergent compositions and subsequent analysis of active components. Active components investigated are those commonly encountered in practice. Data obtained are in good agreement with expected values. The main difficulty encountered was the characterization of a fatty alcohol-EO sulfate which gave higher than expected values for its analyzed content. It was also difficult completely to characterize this fatty alcohol-EO sulfate. Tables, 7 refs.

FATTY ACID COMPOSITION OF CLOTHES SOIL. W. C. Powe and W. L. Marple (Whirlpool Corp.). J. Am. Oil Chemists Soc. 37: 136-138 (Mar. 1960). (1626)

Organic soil that had gradually accumulated on cotton garments and was unremovable by normal washing procedures was analyzed for free and combined fatty acids by gas-liquid chromatography. Photos, tables, 11 refs.

OLEFIN AND TERPENE EPOXIDES. R. J. Gall, J. J. Rizzo, and H. M. Castrantas. Modern Plastics 37: 137-150, 203 (Mar. 1960). (1627)

The properties of the olefin and terpene oxides and their use as reactive diluents for amine-cured epoxy resin castings and coatings are reviewed. 8 refs.

INFLUENCE OF ADDITIVES ON THE PROPERTIES OF SURFACTANT SOLUTIONS. A. K. Biswas and B. K. Mukherji. J. Appl. Chem. 10: 73-80 (Feb. 1960). (1628)

Surface tension, interfacial tension and wetting, emulsifying, foaming, and suspension characteristics of ionic and nonionic surfactant solutions have been determined and evaluated in absence, and in presence, of electrolytes and non-ionogenic additives. Factors governing the surface and bulk properties of surfactant solutions and how these are influenced by additives are considered. Graphs, tables, 16 refs.

EFFECT OF TWO CLEANING METHODS ON A WOOL KNIT FABRIC. M. A. Morris, B. W. Mitchell, and A. D. Hoban. J. Home Econ. 52: 166-171 (Mar. 1960). (1629)

The effect of two cleaning methods, using an aqueous soap solution and an organic solvent, on a wool knit fabric was investigated. The efficiency of each method in removing soil from the wool fabric was measured by reflectance readings and visual ratings. Two solubility tests and a staining reaction were used to estimate fiber modification resulting from the cleaning procedures. Considering only efficiency of soil removal and degree of fiber modification, it appears that equally satisfactory results could be obtained from either laundering or dry-cleaning wool knit fabrics, using the conditions described in this study. Tables, 15 refs.

GEL COATS: INDUSTRIAL APPLICATIONS. A. Jones. Fibres and Plastics 21: 54-56 (Feb. 1960). (1630)

The author discusses the industrial applications of gel coats on reinforced plastics and suggests possible resin mixes, the use of fillers and pigments, and curing techniques.

ULTRAVIOLET LIGHT ABSORBERS: THEIR USE IN PLASTICS. Fibres and Plastics 21: 44-47 (Feb. 1960). (1631)

This article describes the properties and applications of various ultraviolet absorbers suitable for a number of transparent plastics.

DETERMINATION OF THE RESIDUAL XANTHATE CONTENT IN REGENERATED CELLULOSE FILAMENTS. B. Philipp. Faserforsch. u. Textiltech. 10, No. 10: 493-495 (1959). In German. Through BCIRA 40: 574 (1960). (1632)

The sensitivity of various methods for determining small amounts of carbon disulfide (polarographic determination as potassium ethylxanthate in N ethyl-alcoholic potassium hydroxide or as dithiocarbamate in ethyl-alcoholic diamine solution; ultraviolet spectroscopic determination as potassium ethylxanthate or as diethyldithiocarbamate) is compared and, based on the available experimental data, a method is proposed for determining the residual content of regenerated cellulose filaments.

STABILIZATION OF POLYVINYL CHLORIDE. Fibres and Plastics 21: 47-50, 56 (Feb. 1960). (1633)

A number of materials which have useful stabilizing properties for exposure to heat and ultraviolet light are described.

LOW FOAM NONIONIC SURFACTANTS. J. Dupre, R. E. Wolfrom, and D. B. Fordyce (Rohm & Haas Co.). Soap Chem. Specialties 36: 55-56, 112 (Mar. 1960). (1634)

Textile applications are discussed and textile detergency data presented. Tables, 4 refs.

Physics G2

FRICTION OF FIBER ASSEMBLIES. J. D. Huffington and H. P. Stout (Brit. Jute Trade Research Assoc.). Wear 3: 26-42 (Jan. 1960). (1635)

A study of the friction of fiber assemblies included the case of crossed layers of yarn or the case of yarns rubbing against a solid surface, fringes sliding over one another with their fibers parallel, cloth sliding against Tufnol, and felt sliding against Tufnol. Diagr, graphs, tables, 7 refs.

AN APPROACH TO VISCOELASTIC BEHAVIOR WITH A MATHEMATICAL METHOD. S. Watanabe (Tokyo Univ.). J. Textile Machy. Soc. Japan 5: 10-13 (Dec. 1959). (1636)

A new master theory on rheology is shown by using derivatives of fractional order. This theory is sufficient to describe, simply and definitely, stress-strain relations as functions of time which represent many well-known viscoelastic behaviors. Graphs, 5 refs.

PERMEABILITY TO WATER OF PARTIALLY SATURATED GLASS FIBER BEDS. J. D. Parker (Inst. of Paper Chemistry). Ind. Eng. Chem. 52: 247-250 (Mar. 1960). (1637)

Glass fibers provided a geometrically simple medium for a basic study of the permeability to liquids of partially saturated fibrous systems. Compared with several different granular media of comparable pore size, glass fiber beds show a more rapid fall-off in water relative permeability with decreasing saturation. With a quantitative expression derived from a modified Kozeny-Carman equation, relative permeability can be defined in terms of four system variables: usual pore size distribution, hydraulic tortuosity, Kozeny shape factor, and a shape factor characteristic of the surface to volume ratio of the pores. Graphs, 17 refs.

LOW ANGLE X-RAY DIFFRACTION OF FIBROUS POLYETHYLENE. A. S. Posner, L. Mandelkern, C. R. Worthington, and A. F. Diorio (U.S. Nat. Bur. Standards). J. Appl. Phys. 31: 536-542 (Mar. 1960). (1638)

The low angle pattern of the polyethylene fiber is discussed. In addition, a report is presented on the changes incurred in the diffraction angle of the maxima, their relative intensities and shape as a result of various physical treatments. In particular, the effects of intermolecular crosslinking, controlled thermal shrinkage, and melting and recrystallization are presented. 35 refs.

Biology G3

STUDY OF DAMAGE TO COTTON FIBERS BY VARIOUS MICROORGANISMS. K. K. Potapova, E. A. Sankov, and B. Yanovskaya. Tekhnol. Tekstil. Prom. No. 5 (12): 23-25 (1959). In Russian. Through BCIRA 40: 803 (1960). (1639)

Photomicrographs are given for cotton fibers broken down by various microorganisms (Monilia, Nigrospora, Penicillium, Clodosporium, Alternaria, Mucor, Fusarium, and Aspergillus niger) and an x-ray diffraction diagram shows the curve referring to the contaminated cotton, which is characterized by less pronounced maxima as compared with the healthy cotton. It is assumed that this change indicates breakdown of the fiber fibrils and disturbance in their orientation. As a result of the disrupted structure, the fiber strength decreases and its physico-chemical properties alter.

GERMS BEWARE. Ind. Eng. Chem. 52: 31A-32A (Mar. 1960). (1640)

Bacteriostats in textiles, hospital equipment, and a growing list of consumer products.

MISCELLANY H

TEXTILE RECORDER ANNUAL 1959/60: BOOK OF THE YEAR. Harlequin Press Ltd, Manchester, England, 1960. 154 p. (1641)

This review of 1958 in the British textile industry includes surveys of trade and industry, as well as a series of articles on technical progress in the mills, new machinery and equipment, raw materials position, and import and export statistics.

SOURCES OF STATISTICS FOR THE TEXTILE TRADE IN THE UNITED KINGDOM. I. G. Ross. Nylon Outlook 2, No. 7: 36-41 (Winter 1959/60). (1642)

DEVELOPMENT OF THE RUSSIAN COTTON INDUSTRY IN THE PERIOD 1959-1965. A. G. Astashev. Tekstil. Prom. 19, No. 4: 4-9 (1959). In Russian. Through BCIRA 40: 672 (1960). (1643)

The aims of the current 7-year plan for the Soviet cotton industry are described. It is planned to increase the production of cotton cloth by 33-38% (based on the 1958 level) and to install 4,012,000 spinning spindles and 72,600 looms.

TEXTILE RESEARCH ACHIEVEMENTS IN 1959. PART 2. MANUFACTURING METHODS AND EQUIPMENT. J. B. Goldberg. Textile Inds. 124: 144-150 (Feb. 1960). (1644)

TEXTILE RESEARCH ACHIEVEMENTS IN 1959. PART 3. J. B. Goldberg. Textile Inds. 124: 123, 127-133 (Mar. 1960). (1645)

IMPLICATIONS OF MULTISHIFT WORKING. W. C. Crow (J. Baynes Ltd). Textile Weekly 60 (1): 548-550 (Mar. 4, 1960). (1646)

The various types of multishift working are defined, and their political, social, economic, and managerial implications are discussed.

THE WORK OF SHIRLEY INSTITUTE: SOME PRACTICAL FACTORY APPLICATIONS OF RESEARCH RESULTS. Textile Merc. 141: 583-586 (Oct. 30, 1959). (1647)

Research projects described are on cardroom dust, self-brushing of warps, wet and dry doubling, weaving, chlorite bleaching, enzymic desizing, the Shirley-Farmer Norton flash steamer, and properties of blends.

WEST OF ENGLAND WOOLENS. G. Hicks. Wool Record 97, No. 2649 (suppl.): 1-24 (Feb. 19, 1960). (1648)

An account of a tour of the West of England woolen industry.

PLASTICS DEVELOPMENTS: REVIEW OF THE LITERATURE FOR THE YEAR 1958-1959. L. W. Brock (Gen. Tire & Rubber Co.). Mech. Eng. 82: 65-73 (Mar. 1960). (1649)

1958-59 developments are reviewed under the headings: materials, engineering properties, processing, products, and the future. 329 refs.

PATTERN OF TEXTILE FIBER COMPETITION. Textile Merc. 141: 712-717 (Nov. 27, 1959). (1650)

In seeking an answer to the question of the extent to which synthetic fibers are threatening the market for wool, a survey was carried out in which the pattern of world fiber consumption is reviewed, with particular reference to the American market, followed by a discussion of the economic and technical considerations affecting the future pattern of competition between the fibers.

TEXTILE MACHINERY AT THE THIRD INTERNATIONAL TEXTILE MACHINE EXHIBITION, MILAN 1959. Textil-Praxis (English ed.) No. 4: 145-192 (Dec. 1959). (1651)

The machines are listed alphabetically by manufacturer under the following general headings: spinning, weaving, knitting, finishing, and accessories. A brief specification of each is included.

A PRODUCER LOOKS AT MARKETING. C. E. Harrison (English Sewing Cotton Co. Ltd). Textile Merc. 141: 577-581 (Oct. 30, 1959); 613-614, 627 (Nov. 6, 1959). (1652)

Some of the advantages and disadvantages of horizontal and vertical organization for production and marketing are considered.

DIZIONARIO TESSILE LANIERO: INGLESE-ITALIANO, ITALIANO-INGLESE. [Dictionary of wool textiles: English-Italian, Italian-English.] Lanerossi SpA, Via Pasubio, 149, Schio, Italy. 1958. 160 p. L300. (1653)

CLOTH TERMS AND PARTICULARS: MANMADE FIBER FABRICS. W. Middlebrook. Textile Mfr. 86: 13-14 (Jan. 1960). (1654)

Descriptions, warp and weft requirements, drawing-in particulars, ends and picks of a range of rayon, nylon, and Terylene cloths including typewriter cloths, sharkskins, crepes, chiffons, parachute cloths, voiles, cloques, etc. Photos.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Manmade fibers A2

AERATED POLYAMIDE, POLYESTER, OR POLYACRYLONITRILE FIBERS WITH IMPROVED HEAT INSULATING PROPERTIES. R. Hochreuter (to Feldmuhle AG). USP 2 904 840, Sept. 22, 1959. (1655)

The fibers which may have been previously dried are treated either in filament form or in form of fabric or tissues successively with a suitable swelling agent, with a catalyst for promoting the decomposition of peroxides, and a peroxy-compound, preferably hydrogen peroxide. Gas or oxygen bubbles evolve, and voids are generated within the fibrillae of the fibers.

PUFFED VISCOSE AND CELLULOSE ACETATE FIBERS. L. Kästli (Switzerland). USP 2 913 769, Nov. 24, 1959. (1656)

Fibers with enhanced heat-insulating properties, increased volume, softer touch, increased opaqueness, and subdued luster are obtained by (1) impregnating dry fibers (in skein or fabric form) with an aqueous solution of potassium permanganate saturated with barium sulfate and (2) subjecting the material to the action of hydrogen peroxide to generate oxygen bubbles within the fibers. The barium sulfate is precipitated within the hollow spaces. The process may be applied to any fiber capable of swelling in water.

BRIGHT REFLECTIVE STAPLE FIBERS. R. C. Griffin, Jr. (to Reynolds Metals Co.). USP 2 926 415, Mar. 1, 1960. (1657)

Fibers of rectangular cross section are produced from corrugated, laminated sheets consisting of a transparent film and a layer of reflective metal by cutting in a transverse direction to the corrugations.

YARN PRODUCTION B

MANUFACTURE OF CRIMPED MULTIFILAMENT YARNS. Heberlein & Co. AG. BP 817 771, Aug. 6, 1959. Through BCIRA 40: 748 (1960). (1658)

A multifilament yarn with little twist is temporarily twisted to a high degree on ring or uptwister bobbins or by a false twist device, heat set, backtwisted to a normal twist, temporarily twisted in the opposite direction by a false twist device, heat set, and backtwisted to normal.

CRIMPING APPARATUS. NV Tricotfabriek. BP 825 245, Dec. 9, 1959. Through BCIRA 40: 744 (1960). (1659)

The yarn is twisted (e.g. three ends are plied together) and passed through a heating tube into a chamber where it encounters a vortex of gas. This draws the yarn into an unsupported loop and false twist is inserted as the loop rotates. The gas also serves as the cooling zone.

PROCESS FOR DYEING AND CRIMPING CONTINUOUS FILAMENT YARNS. L. Pownall (to Brit. Nylon Spinners Ltd). BP 824 709, Dec. 2, 1959. Through BCIRA 40: 314 (1960). (1660)

Continuous filament, thermoplastic yarn (nylon, Terylene, polyacrylonitrile, cellulose triacetate) is given a high twist in one or more stages, wound on a perforated or coil-spring bobbin, and dyed at the boil under pressure, this treatment serving to set the twist. The yarn is then back-twisted to its original degree.

FALSE TWIST CRIMPING APPARATUS. Soc. d'Etudes Recherches de Materiel Textiles. BP 824 942, Dec. 9, 1959. Through BCIRA 40: 312 (1960). (1661)

The yarn is drawn through a heating device and a hollow, rotary spindle that twists the up-stream length of yarn and untwists the down-stream length. The spindle has, towards its exit end, an oblique channel and following this an extension provided with at least one retaining and guiding device for wrapping the yarn, as it emerges from the oblique channel, around the extension and applying frictional restraint so that the tension in the down-stream length will be very much higher than that in the up-stream length. The yarn is released roughly in the axis of rotation of the spindle.

PRODUCTION OF CRIMPED YARN. A. Dobson (to E. Scragg & Sons Ltd). BP 825 155, Dec. 9, 1959. Through BCIRA 40: 746 (1960). (1662)

In a method for the production of crimped, positively twisted yarn in one operation, a thermoplastic yarn is drawn from a positively rotated package, passed near to or in contact with a hot surface to set both the false and positive twist, and then run through a false twist device to a takeup package.

COACTING PULLING WHEELS FOR FEEDING GLASS FIBER MULTIFILAMENT STRANDS. G. Slayter and W. R. Steitz (to Owens-Corning Fiberglas Corp.). USP 2 915 170, Dec. 1, 1959. (1663)

THREAD ADVANCING ROLLERS FOR STORING AND ADVANCING YARN IN A HELICAL PATH. A. P. L. Heidweiller (to Kunstzijdespinnerij Nyma NV). USP 2 915 805, Dec. 8, 1959. (1664)

CONTINUOUS MANUFACTURE OF CRIMPED NYLON. K. Kunz and J. Hafner (to Farbwerke Hoechst AG). USP 2 922 196, Jan. 26, 1960. (1665)

Nylon tow is stretched, mechanically crimped by compression, washed and dried while free of tension, and cut into staples of desired length.

TOW CRIMP SETTING DEVICE. K. W. Gundlach (to Chemstrand Corp.). USP 2 924 001, Feb. 9, 1960. (1666)

Device which permanently sets freshly formed crimps in synthetic filament tow while eliminating the crimp removing effect of tow weight as it is fed to a storage receptacle.

Opening, picking, fiber preparation B1

BEATING DEVICE FOR OPENING BALES OF FIBERS. J. J. Rieter & Cie AG. BP 817 498, July 29, 1959. Through BCIRA 40: 305 (1960). (1667)

The invention relates to a device for loosening and removing cotton from a bale that travels on an overhead grate. The device resembles a large bicycle pedal, to the bars of which are fixed rigid or resilient beaters, various forms of which are claimed. As the device rotates the beaters knock off cotton from the bottom of the bale.

MACHINE FOR SEPARATING WOOL FIBERS OF SHEARED FLEECE. A. Boer (to Bancroft-Brillotex Intern. SA). USP 2 924 854, Feb. 16, 1960. (1668)

METHOD FOR PROVIDING LONG, SOFT BAST FIBERS. M. J. Reider (to George W. Bollmann & Co.). USP 2 925 626, Feb. 23, 1960. (1669)

Ribbons of bark are overlapped on a conveyor belt, crushed, and continuously conveyed through an alkaline soap retting solution. The treated ribbons are then subjected to a scutching action.

MACHINE FOR SEPARATING WOOL FIBERS FROM FLEECE. A. Boer (to Bancroft-Brillotex Intern. SA). USP 2 925 628, Feb. 23, 1960. (1670)

BAST FIBER DECORTICATION. J. Haas (to Intern. Fiber Develop. Corp.). USP 2 926 391, Mar. 1, 1960. (1671)

Continuous system for mechanical decortication, hydraulic defibering, washing, and drying of bast fibers.

Carding and combing B2

SLIVER EQUALIZATION IN COMBING MACHINES. W. Nutter (to T. M. M. (Research) Ltd). USP 2 925 627, Feb. 23, 1960. (1672)

Combed slivers with periodic variations of thickness which are out-of-phase with one another are subjected to a single drawing operation (with only two pairs of rollers) and combined into an output sliver.

Drawing and roving B3

FLYER FOR SPEED FRAMES. G. Dakin, A. Dudley, and W. Scowcroft (to Brit. Cotton Ind. Research Assoc.). BP 825 372, Dec. 16, 1959. Through BCIRA 40: 308 (1960). (1673)

To cope with the problem of the accumulation of fiber outside and inside the hollow leg of a flyer, a slot is formed in the trailing face of the hollow leg, beginning at the outside face near the axis of the leg and finishing at the leading face before the end of the leg so as to provide sufficient support for a presser.

MEANS FOR IMPARTING BACK MOTION TO THE CONE DRUM BELT IN A FLYER FRAME. S. Noda (to Howa Machy. Ltd). USP 2 925 704, Feb. 23, 1960. (1674)

PACKAGE DOFFING MECHANISM FOR MACHINES FOR WINDING TEXTILE SLIVERS. J. Speak (to Prince-Smith & Stells Ltd). BP 825 484, Dec. 16, 1959. Through BCIRA 40: 307 (1960). (1675)

The invention relates to hydraulic means for automatically doffing the cross-wound ball or cheese of sliver produced in the inventors' spindle when a predetermined length has been wound.

TOP DRAFTING ROLL WEIGHTING. C. H. Williams and B. C. Cole. USP 2 924 855, Feb. 16, 1960. (1676)

Spring weighting unit in which the spring tension adjustment is independent of the stirrup adjustment so that the desired weighting may be applied by gaging the distance between the spring housing and the part actuated by the spring.

MEANS FOR MEASURING SLIVER PRODUCTION. C. D. Forney, Jr. USP 2 925 630, Feb. 23, 1960. (1677)

Apparatus for measuring sliver as it is introduced into the coiler head of a coiler mechanism.

PACKAGE-DOFFING MECHANISM FOR WORSTED GILL BOX DRAWING FRAMES. J. Speak (to Prince-Smith & Stells Ltd). USP 2 925 961, Feb. 23, 1959. (1678)

Automatic mechanism for doffing each package after a predetermined length of material has been wound.

ADJUSTABLE PRESSURE DEVICES FOR DOUBLE ENDLESS TAPE DRAFT UNITS FOR SLIVERS OF HARD FIBERS. A. Gardella (Italy). USP 2 926 393, Mar. 1, 1960. (1679)

Spinning, winding, twisting B4

DRAFT MECHANISM FOR SPINNING MACHINES. E. Toenniessen and H. Bischoff. BP 817 206, July 29, 1959. Through BCIRA 40: 309 (1960). (1680)

The invention relates to a light and stable pressure-roller bearing and loading arm, of inverted U cross-section, that may be combined readily with the spring-loaded bearings in such a way that the pressure rollers maintain strict parallelism with the bottom rollers.

CONDENSER SPINNING TAPES. H. Siegling. BP 817 910, Aug. 6, 1959. Through BCIRA 40: 739 (1960). (1681)

A tape for use in condenser spinning has a middle lamina of stretched polyamide or polyurethane bonded on both faces to mixed polyamide or polyurethane layers containing plasticizers. The tape is claimed to be resistant to oil or fat and not to develop static charges.

YARN TENSIONING DEVICES FOR DOUBLING MACHINERY. F. Ridgway (to Arundel, Coulthard & Co. Ltd). BP 817 967, Aug. 6, 1959. Through BCIRA 40: 743 (1960). (1682)

A disc drag comprises a casting of cutaway bell shape in which hangs a C-shaped spindle that carries two discs between which the yarn runs. Concentric weights may be added to the top disc. The spindle is clipped into a bush in such a way that limited lateral movement is permitted.

RING OR CAP SPINNING OR TWISTING APPARATUS. J. I. Meldrum and W. Oughton (to Courtaulds Ltd). BP 825 215, Dec. 9, 1959. Through BCIRA 40: 741 (1960). (1683)

Mechanism for disposing of the loose end of yarn so that it does not hang from the bobbin in starting.

SPINDLE MOUNTINGS FOR TEXTILE SPINNING AND TWISTING MACHINES. SKF Kugellagerfabriken GmbH. BP 825 346, Dec. 16, 1959. Through BCIRA 40: 311 (1960). (1684)

In a spindle mounting of the type in which a driving member can be coupled to a member associated with the spindle blade, the latter member takes the form of a support on which the driving member is mounted for rotation and both, with their bearings, can be fitted to the blade as a single unit.

DRAFTING HEADS FOR SPINNING MACHINES. Württembergische Spindelfabrik GmbH. BP 825 407, Dec. 16, 1959. Through BCIRA 40: 310 (1960). (1685)

A drafting head that serves for a very wide range of staples from short to long comprises releasable coupling means by which holders of top rollers can be rigidly interconnected to form a common weighted holder or left to operate as separate weighted holders.

FALSE TWIST SPINDLES. A. W. Ward and J. R. Wylde (to Brit. Celanese Ltd). BP 825 655, Dec. 16, 1959. Through BCIRA 40: 313 (1960). (1686)

The spindle comprises a rotor in the form of a hollow member with external vanes and a stator, surrounding and carrying bearings for the rotor, mounted on a trunnion for easy inversion. Compressed air is fed to the stator to drive the rotor by its vanes and inversion of the stator results in reversal of the direction of rotation.

VENTILATION AND DUST REMOVAL SYSTEM FOR RING SPINNING. R. Sutcliffe (to Textile Air Systems Ltd). USP 2 924 062, Feb. 9, 1960. (1687)

The broken end suction unit is positioned on the same end of the frame as the driving motor so that it serves to cool the motor as well as evacuate any dust or fluff which tends to accumulate at the frame end.

MAGNETIC BOBBIN BRAKE FOR DOUBLE TWIST SPINDLES. E. Hedtmann and W. Buhrow (to Vereinigte Glanzstoff Fabriken AG). USP 2 924 064, Feb. 9, 1960. (1688)

SPINNING RING AND TRAVELER. R. Ragan. USP 2 924 066, Feb. 9, 1960. (1689)

Stamped sheet metal ring in which an oil sump is incorporated integrally with the ring. Conventional travelers may be used but an improved traveler is described.

THREAD FEEDING STOP DEVICE FOR YARN PLYING MACHINE. M. Kühnrich, G. Lässig, and W. Schulze (to VEB Spinn- und Zwirnereimaschinenbau). USP 2 924 931, Feb. 16, 1960. (1690)

Device for stopping yarn delivery in the event of yarn breakage in machines producing multistrand yarns.

HIGH SPEED TWISTING APPARATUS WITH MAGNETIC BUILDER CONTROL. C. P. Geen. USP 2 924 065, Feb. 9, 1960. (1691)

PNEUMATIC APPARATUS FOR FORMING SPUN YARN FROM SLIVER OF STAPLE FIBERS. L. M. Keeler, A. J. Vincent, and J. G. Gamble. USP 2 926 483, Mar. 1, 1960. (1692)

A sliver of untwisted staple length fiber is reduced by drafting to the desired count and is then advanced into a vacuum nozzle which withdraws the fibers from the advancing end of the untwisted strand or sliver and delivers them to a spinning element rotating at a very high speed so as to provide free spinning ends which are twisted to form a spun yarn.

COMPOSITE SPINNING OR TWISTING RING. L. R. Ladd (to Albrecht Mfg. Co.). USP 2 926 484, Mar. 1, 1960. (1693)

Porous, oil-absorbent ring whose traveler guiding portion is constructed of high grade metal while the remainder of the ring is made of cheaper metal or plastic.

PLASTIC TRAVELER WITH REINFORCED INSERT. L. H. Morin (to Coats & Clark, Inc.). USP 2 926 485, Mar. 1, 1960. (1694)

Yarns B5

STRETCH MONOFILAMENTS. Heberlein & Co. AG. BP 817 768, Aug. 6, 1959. Through BCIRA 40: 747 (1960). (1695)

Monofils for knitting into high-stretch hosiery are prepared by temporarily twisting together, on a false twist device, two or more monofils (10-15 den.), heat setting the twist, and separating; the monofils are lubricated with an oil emulsion before or during the twisting operation. In knitting, a monofil with twist set in the S-direction is meshed with a Z-twist monofil.

YARN PACKAGE SUPPORTS. A. Slade (to Brit. Nylon Spinners Ltd). BP 824 700, Dec. 2, 1959. Through BCIRA 40: 329 (1960). (1696)

A yarn package holder, for creels and knitting machines, that can serve for different sizes and shapes of package, has a central spindle with three or more longitudinal grooves in which are V-shaped springs to grip the package from inside.

METHODS FOR MANUFACTURING LOOPED YARN. Algemene Kunstzijde Unie NV. BP 824 729, Dec. 2, 1959. Through BCIRA 40: 315 (1960). (1697)

A composite yarn made from singles that differ in shrinkage (e.g. fully shrunk and non-shrunk nylon) is twisted, propelled in a fast gas stream through a confined zone and diverted from the stream, preferably oiled, and wound into a package.

MANUFACTURE OF ROPES. Farbwerke Hoechst AG. BP 825 627, Dec. 16, 1959. Through BCIRA 40: 316 (1960). (1698)

A core of almost parallel, low-twist yarns of the nylon type has a braided cover that constitutes 33-50% of the weight of the rope.

APPARATUS FOR PRODUCTION OF BULK YARN. Kunstseiden AG and NV Onderzoekingsinst. Research. BP 825 237, Dec. 9, 1959. Through BCIRA 40: 745 (1960). (1699)

A bulked yarn is made by running a twisted assembly of continuous filaments through a channel in which it encounters a transverse stream of compressed gas directed secantially against the direction of twist.

BULK NYLON YARN MANUFACTURE. J. A. Place, G. G. Thomas, and G. A. White (to Brit. Nylon Spinners Ltd). USP 2 914 906, Dec. 1, 1959. (1700)

Multifilament yarn consisting mainly of a synthetic linear polymer (e.g. nylon) and having little or no twist is run between two moving surfaces (at least one being the surface of a roller) that effect intermittent separation (without rupture) of the filaments over random, short lengths, and the product is then twisted into a yarn.

METHOD AND APPARATUS FOR PRODUCING VARIABLE DENIER YARN. R. F. Dyer (to Eastman Kodak Co.). USP 2 920 345, Jan. 12, 1960. (1701)

Slub yarns are produced by randomly and intermittently vibrating a spring-restrained guide lever so as to increase alternately the relative drafting force on the yarn.

APPARATUS FOR MAKING NUB YARNS. A. B. Steinruck (to Proctor & Schwartz Inc.). USP 2 923 980, Feb. 9, 1960. (1702)

APPARATUS FOR BULKING YARN. E. J. Griset, Jr. and J. A. McIntosh (to E. I. du Pont de Nemours & Co.). USP 2 924 000, Feb. 9, 1960. (1703)

Apparatus for producing continuous filament yarn characterized by the presence of curls or loops of extremely small diameter by subjecting the yarn to the action of a whirling gas stream.

SYNTHETIC YARN SPOOL. L. L. Phillips. USP 2 924 396, Feb. 9, 1960. (1704)

Spool capable of delivering larger amounts of knotless yarn yardage than spools having the same base dimensions, with means for creating a retarding friction to prevent over running as the yarn is withdrawn.

AIR JET DEVICE FOR PRODUCING BULKED YARN. R. F. Dyer (to Eastman Kodak Co.). USP 2 924 868, Feb. 16, 1960. (1705)

RACKING APPARATUS FOR YARN PACKAGES. S. Fürst (to Walter Reiners). USP 2 924 919, Feb. 16, 1960. (1706)

Apparatus for receiving packages periodically delivered from a winding machine and transferring them to a storage rack in a predetermined order so that they may be used in exactly the same order in which they were delivered.

DRIVE FOR SOFT YARN TUBES. E. K. Bauer (to Am. Viscose Corp.). USP 2 926 511, Mar. 1, 1960. (1707)

METHOD FOR PRODUCING STRETCH CELLULOSE ESTER YARNS. C. G. Evans (to Deering Milliken Research Corp.). USP 2 925 641, Feb. 23, 1960. (1708)

The yarn is treated with an aqueous solution of a non-oxidizing inorganic acid or its salt to increase its elongation without decreasing its strength, washed, heated, and passed over a sharp blade while under tension to deform the yarn.

EXTENSIBLE COTTON SEWING THREAD. E. C. Pfeffer, Jr. (to Cluett, Peabody & Co.). USP 2 925 642, Feb. 23, 1960. (1709)

Thread which will eliminate seam shrinkage and pucker during laundering is produced by temporarily contracting its length by immersion in caustic soda and coating it with a nontacky, water soluble and nonelastic adhesive.

MOLDED PLASTIC SEWING THREAD SPOOL. L. H. Morin (to Coats & Clark, Inc.). USP 2 926 866, Mar. 1, 1960. (1710)

BONDING TEXTILES TO RUBBERS WITH RESORCINOL AND DIARYL GUANIDINE FORMALDEHYDE REACTION PRODUCT. H. M. Buckwalter and J. M. Almand (to U.S. Rubber Co.). USP 2 927 051, Mar. 1, 1960. (1711)

Improved bonding of tire cord to rubber by incorporating in the rubber stock a resorcinol and diaryl guanidine formaldehyde reaction product.

FABRIC PRODUCTION C

JACQUARD CONTROL FOR EMBROIDERY MACHINE. K. Scheibel and A. Bohmann (to VEB Spezialnahmaschinenwerk Limbach). USP 2 926 703, Mar. 1, 1960. (1712)

Warping, slashing, yarn preparation C1

CREEL BOBBIN HOLDER. J. Noguera (to Casablancas High Draft Co. Ltd). BP 817 665, Aug. 6, 1959. Through BCIRA 40: 740 (1960). (1713)

A dependent bobbin holder comprises a long, hollow casing that fits in the bobbin core and a collarlike catch that grips the end of the bobbin and can be rotated to a releasing or a retaining position by causing it to slide along the casing.

BOBBIN WINDING MACHINES. R. Seiler, A. Schniebs, H. Schönherr, H. Ludwig, and J. Kipping (to VEB Spinn und Zwirnerei Maschinenbau). BP 817 763, Aug. 6, 1959. Through BCIRA 40: 761 (1960). (1714)

The bobbin is driven by a pivoted drum balanced by a counterweight and the thread guide cam is driven, on the spindle, through a countershaft.

LEASE BARS. Zellweger Ltd. BP 824 911, Dec. 9, 1959. Through BCIRA 40: 330 (1960). (1715)

Claims are made for a rather flattened rod that has at least three slightly rounded edges parallel to one another with concave surfaces between the edges.

YARN CLEARER FOR USE IN SMOOTHING IRREGULARITIES IN YARN. J. S. Plenderleath (to Jute Inds. Ltd). BP 818 479, Aug. 19, 1959. Through BCIRA 40: 328 (1960). (1716)

A yarn clearer is formed of a guide bar that is screwed to the breastplate of a winding or like machine so as to provide a long slot across the path of the yarn, this being free to traverse about a midpoint of the slot. The face of the bar is scored with two sets of grooves sloped across the bar in opposite directions about the midpoint. These grooves provide clearing and catching edges for slubs and the like.

SLUB CATCHER. J. S. Taylor. BP 825 098, Dec. 9, 1959. Summary in BCIRA 40: 762 (1960). (1717)

EXPANSIBLE COMB FOR WARP SHEETS. G. W. Ibbs (to E. I. du Pont de Nemours & Co.). USP 2 924 002, Feb. 9, 1960. (1718)

HYDRAULIC BRAKING SYSTEM FOR BEAMING OR SLASHING APPARATUS. N. E. Klein, C. D. Lucas, and G. A. Mobley (to Deering Milliken Research Corp.). USP 2 924 869, Feb. 16, 1960. (1719)

SLASHER DRYING APPARATUS. I. L. Griffin and W. A. Griffin. USP 2 926 429, Mar. 1, 1960. (1720)

Apparatus in which a single web of yarn delivered from a single size box may be wet-split into two webs and the two webs simultaneously dried without contacting each other.

Weaving C2

HYDRAULIC SHUTTLE CHECKING DEVICES. A. E. Zarn (Switzerland). BP 817 915, Aug. 6, 1959. Through BCIRA 40: 764 (1960). (1721)

A device of the piston and cylinder type, but for fitting to change box looms, is arranged so that the stroke for shuttle checking is less than the available full stroke, means being provided to complete the stroke for box changing. The means may be a lever tripped by a flexible connection that is guided over a roller to the lay, or may include rodding operated from a driven eccentric of the loom.

WEFT REPLENISHING SHUTTLE-SCANNING DEVICE. Tissomat AG. BP 824 771, Dec. 2, 1959. Through BCIRA 40: 331 (1960). (1722)

The invention relates to a more robust form of the electric contact device for scanning shuttles in automatic looms fitted with electric weft replenishing and/or color selecting mechanisms. One side wall of each compartment of the shuttle box carries a rubber feeler in which are embedded contact springs connected to the various control circuits and making contact with plates on the shuttle.

SHUTTLELESS LOOM SELVAGE MOTION. M. R. Flamand (to Draper Corp.). USP 2 924 247, Feb. 9, 1960. (1723)

Selvage motion in which the harnesses are given opposed differential movements throughout the greater part of their travel so that the threads are crossed off center and on a level with those of the main warp sheet.

ELECTROMECHANICAL WARP CONTROL SYSTEM FOR LOOMS. A. W. Omar (Pakistan). BP 825 221, Dec. 9, 1959. Through BCIRA 40: 763 (1960). (1724)

Shedding mechanism comprises a reciprocating member in which a number of heddle rods can slide, each rod having a clutch controlled by an interior electromagnet so that the rod can only slide, to effect shedding, when its clutch is engaged.

FABRIC TAKEUP DRIVE. G. E. Clentimack (to Draper Corp.). USP 2 924 084, Feb. 9, 1960. (1725)

In a loom or knitting machine takeup, the speed variation is governed by a spring which balances a displacement member in a reduction gear train to compensate for increase in roll size.

HORIZONTAL PICKING MOTION. J. A. Morin (to Textile Develop. & Machy. Ltd). USP 2 924 248, Feb. 9, 1960. (1726)

Using the horizontal picking motion instead of the vertical motion found on conventional looms, an increase of 15 to 20% in the operating speed is claimed.

LOOM STOP BRACKET DEVICE. A. Klafke (to Lindauer Dornier GmbH). USP 2 924 249, Feb. 9, 1960. (1727)

The bracket, mounted on the loom lay, is guided in a curved path and is provided with a feeler extending into the shuttle receiving box. As long as the feeler is engaged by the shuttle arriving at the correct time, the bracket is retained in a lifted position.

HARNESS SHEAVES OF SELF-LUBRICATING NYLON. L. G. Urquhart and B. Thal (to H. F. Livermore Corp.). USP 2 925 739, Feb. 23, 1960. (1728)

SATIN WEAVE WITH TWILL EFFECT FOR NARROW FABRICS. E. R. Bowser. USP 2 925 832, Feb. 23, 1960. (1729)

WEFT INSERTION NOZZLE. L. te Strake (Netherlands). USP 2 925 833, Feb. 23, 1960. (1730)

Nozzle capable of inserting weft yarns into and through a shed and across warp yarns forming the shed, the weft yarns being connected by bights which are wrapped over the outermost warp yarns to form a natural selvage.

SHUTTLE TIPS. H. P. Rutherford (to Multi Corp.). USP 2 925 834, Feb. 23, 1960. (1731)

The shuttle tip is rigidly attached to the shuttle body by attachment pins positioned in skewed relation to the longitudinal axis of the body to provide additional strength and resistance to splitting.

CARPET LOOM LOOP PILE CUTTER. H. W. Penman (to Magee Carpet Co.). USP 2 926 702, Mar. 1, 1960. (1732)

Series of cutting blades associated with the loom gages to cut the pile loops formed on the gages.

Knitting C3

TWO-FEED CIRCULAR HOSIERY MACHINE. J. S. Macon (to Burlington Inds.). USP 2 911 806, Nov. 10, 1959. (1733)

Auxiliary feed station for Scott & Williams HH-PW half-hose knitting machines permits 2-feed knitting through the elastic top of a sock, so that the rubber yarn will be interlaced in every other course to give better fit and appearance.

FLOAT TRIMMER FOR CIRCULAR HOSIERY. J. L. Blais (to Tricnit Hosiery Mills). USP 2 915 803, Dec. 8, 1959. (1734)

FULL-FASHIONED KNITTING MACHINE. W. M. Golaski. USP 2 923 142, Feb. 2, 1960. (1735)

Use of modified narrowing fingers for producing designs in the body of the fabric independently of the conventional selvage fingers.

FABRIC TAKEUP FOR FLAT KNITTING MACHINES. L. J. Brooke (to Wildman Jacquard Co.). USP 2 924 085, Feb. 9, 1960. (1736)

Method of guarding the hooks of the takeup to prevent injury to the knitter.

KNITTING ARGYLE HOSE. N. Levin (to Textile Mach. Works). USP 2 924 956, Feb. 16, 1960. (1737)

Method of operation for a four feed circular knitting machine by reciprocation to knit an overplaid design in suture joined areas of a tubular fabric.

YARN SHEET TENSIONING MEANS FOR FLAT KNITTING MACHINES. P. J. Schoenster (to Alfred Hofmann & Co.). USP 2 924 957, Feb. 16, 1960. (1738)

In addition to the usual spring which allows a wide range of fluctuations in the tension rod, auxiliary means are provided for limiting the overall operating range of the rod in accordance with the tension requirements of the yarn.

YARN SEVERING MEANS FOR CIRCULAR KNITTING MACHINES. J. D. Moyer (to Textile Mach. Works). USP 2 924 958, Feb. 16, 1960. (1739)

The severing means and its electrical control are situated within the circular outline of the needle cylinder in machines for forming patterned fabrics.

SINKER STRUCTURE FOR CIRCULAR KNITTING MACHINES. B. F. Coile (to Textile Mach. Works). USP 2 925 724, Feb. 23, 1960. (1740)

Mechanism for facilitating the drawing of a uniform length of yarn by the needles in forming fabric loops.

SEAMED TOE FOR SEAMLESS HOSIERY. J. F. Tew (to Whitmire Hosiery Mills). USP 2 926 513, Mar. 1, 1960. (1741)

Method of knitting a form-fit toe pocket on a circular knitting machine which can be quickly closed by seaming on a sewing machine.

Fabrics C4

MACHINES FOR PRODUCING PILE FABRICS. C. Paerse (to Paerse-Laing Ltd). BP 818 432, Aug. 19, 1959. Through BCIRA 40: 335 (1960). (1742)

Loops are formed in a number of parallel continuous filament yarns by bending them around a set of blades mounted on rollers in belt-like manner, a device carrying a set of cutting wheels is advanced to sever the loops between the blades, and a fluid or plastic substance (and, if desired, a fabric backing) is applied to form the foundation for the cut pile before the blades are removed.

FLEXIBLE BARGES OR STORAGE VESSELS. W. E. Morton (to Dracone Develops. Ltd). BP 824 506, Dec. 2, 1959. Through BCIRA 40: 339 (1960). (1743)

The vessel comprises a fabric envelope made up of at least two bonded layers of cords (e.g. of nylon), at least one layer extending in the length direction and at least one layer being wound circumferentially in helical turns with a small lead. The envelope is embedded in rubber or the like. If the circumferential layers are even in number, half may be wound in opposition to the others. The lengthwise cords are brought together at the nose to a ring clamp, which is provided with a bung. Some of the cords may be gathered at the nose into a towing rope.

TEXTILE RIBBONS. Ribbon Manufactory Ltd, Breitenbach. BP 824 692, Dec. 2, 1959. Through BCIRA 40: 337 (1960). (1744)

In lingerie ribbons besides the warp and weft for the ground fabric an extra nylon warp is woven in under tension to form surface floats on one face, held by occasional wefts. When the weaving tension is relaxed the floats pile up like arches.

CURTAIN HEADING TAPE. J. Warburton (to James Carr & Sons Ltd). BP 824 704, Dec. 2, 1959. Through BCIRA 40: 336 (1960). (1745)

The tape is woven with extra yarns parallel to the warp to form floats alternately back and front, held at intervals by the weft. The floats provide the pockets for hooks and comprise, alternately, a central group and two marginal groups.

WOVEN OR KNITTED FABRICS FROM CRIMPED YARN. Heberlein & Co. AG. BP 824 747, Dec. 2, 1959. Through BCIRA 40: 338 (1960). (1746)

The difficulty of weaving or knitting synthetic yarn that has been crimped by false twisting, heat setting, and back twisting is overcome by running the yarn under constant tension through a hot zone (moist or dry) to effect a temporary reduction of the latent crimp. The woven or knitted fabric or article is then subjected to a wet treatment (e.g. bleaching) or steam to restore the original latent crimp.

NONWOVEN FABRICS. A. I. Lenton and E. Spencer (to Richard Haworth & Co. (Mfg.) Ltd). BP 824 941, Dec. 9, 1959. Through BCIRA 40: 340 (1960). (1747)

A pad of nonfelting thermoplastic fiber is punctured under pressure by hot needles that cause local fusion followed on cooling by adhesion at points spaced apart about half the staple length of the fiber.

WATERPROOF CLOTHING. H. Klepper. BP 825 256, Dec. 9, 1959. Through BCIRA 40: 341 (1960). (1748)

The clothing is lined with a fabric that has in it foamed rubber (in strips or checks) to serve as spacers providing ventilation channels.

LOW FRICTION FABRIC. C. S. White. USP Reissue 24 765, Jan. 12, 1960. Original No. 2 804 886, Sept. 3, 1957. (1749)

Antifriction fabric woven of threads of two different materials in order to provide a low friction surface on one side and a bondable surface on the other.

APPARATUS FOR MAKING NONWOVEN FABRICS CONTAINING FIBERS OF BOTH PAPERMAKING AND TEXTILE LENGTH. F. H. Osborne and M. F. Kilty, Jr. (to C. H. Dexter & Sons Inc.). USP 2 913 365, Nov. 17, 1959. (1750)

Soft, flexible, porous, and strong fibrous webs are formed by the use of papermaking machinery in combination with means for also incorporating fibers of textile length in the webs.

NEEDLE LOOM DRIVE. B. O'Byrne (to William Bywater Ltd). USP 2 915 804, Dec. 8, 1959. (1751)

Driving mechanism of the ratchet or other takeup motion which controls the rate of draw-through of the material being treated in the loom.

APPARATUS FOR PRODUCING GLASS FIBER MATS BY ELECTROSTATIC DEPOSITION. K. Sittel (to Walsco Co.). USP 2 920 679, Jan. 12, 1960. (1752)

LOOPED PILE UPHOLSTERY FABRIC. B. H. Foster and N. Haddad (to U. S. Rubber Co.). USP 2 921 360, Jan. 19, 1960. (1753)

A flat ground fabric has highly contractile thermoplastic yarns running in one direction and parallel to them a system of lofty float yarns. On heating, the contractile yarns shrink, causing the floats to buckle and form a pattern of loops.

COLD WEATHER KNITTED GARMENT. A. M. Evans (to Duofold Inc.). USP 2 921 457, Jan. 19, 1960. (1754)

Quilted multi-layer garment consisting of two inner interlocked weft knit layers, a porous foam rubber layer, and an outer warp knit layer to assist the weft knit fabric in protecting the foam layer against damaging extension.

CONCRETE STRUCTURAL ELEMENT REINFORCED WITH GLASS FIBERS. S. Goldfein (to U. S. Secy. Army). USP 2 921 463, Jan. 19, 1960. (1755)

MACHINE FOR REMOVAL OF LOOSE THREADS FROM TUFTED FABRIC. E. H. Gilbreath, Jr. (to So. Mach. Co.). USP 2 922 214, Jan. 26, 1960. (1756)

WEAVING SURGICAL BIFURCATED TUBES FOR REPLACEMENT OF DISEASED OR DAMAGED BLOOD VESSELS. J. B. Sidebotham. USP 2 924 250, Feb. 9, 1960. (1757)

BONDED NONWOVEN FABRIC. N. A. Matlin and B. B. Kine (to Rohm & Haas Co.). USP 2 923 653, Feb. 2, 1960. (1758)

Solvent- and wash-resistant nonwoven fabrics are formed by the use of a bonding agent consisting of an aqueous dispersion containing a water-soluble aminoplast and a water-insoluble polymer of certain hydroxyl-containing esters or amides.

METHOD OF WEAVING VELVET OR WILTON TYPE PILE FABRIC WITH SIMULATED LENO EFFECT. H. F. Nowicki and H. J. Smiley (to James Lees & Sons Co.). USP 2 924 251, Feb. 9, 1960. (1759)

SURGICAL DRESSINGS. H. Baron (Germany). USP 2 924 252, Feb. 9, 1960. (1760)

Double fabric containing neighboring warp threads of differing shrinking or swelling capacity when in contact with moisture emanating from wounds.

METHOD FOR SHAPING THERMOPLASTIC FABRICS. B. Michalko (to Union Carbide Corp.). USP 2 924 852, Feb. 16, 1960. (1761)

PROCESS FOR MAKING A DEFORMABLE NONWOVEN FIBROUS TAPE. A. Scheibe and W. Streller (to VEB Zentrales Projektierungsbuero der Textilindustrie). USP 2 924 853, Feb. 16, 1960. (1762)

Spun synthetic fiber cable is cut into staple fiber sections, the sections are shaved into thin fiber layers, and the layers of oriented fibers are formed into a fleece.

BODY ARMOR FABRIC. L. P. Frieder and W. S. Finken (to Gentex Corp.). USP 2 925 098, Feb. 16, 1960. (1763)

In a ballistic fabric made up of fabric layers bonded together by selected warp yarns, the spacing between the layers is held constant regardless of the number of layers included.

FINISHING D

Chemical processes D1

PRODUCTION OF CREASES IN GARMENTS. P. Hatfield and R. H. Thorne (to Brit. Nylon Spinners Ltd). BP 823 789, Nov. 18, 1959. Through BCIRA 40: 125 (1960). (1764)

A polyamide monofil of softening point in the range 80–160° C (a list is given) is laid along the nick of a conventional crease (e.g. in a trouser leg) and fixed by means of a hot iron. Alternatively, the hot polyamide is applied from a gun.

PROCESS FOR THE OPTICAL BRIGHTENING OF FIBERS OF POLYACRYLONITRILE. Ciba Ltd. BP 824 659, Dec. 2, 1959. Through BCIRA 40: 373 (1960). (1765)

The agents are bis-benzimidazolylethylenes characterized by green-blue fluorescence, absence of sulfonic or carboxylic acid groups and lack of affinity as dyes.

ANTISTATIC TREATMENT FOR POLYACRYLONITRILE TEXTILES. D. R. Lawrance (to Brit. Nylon Spinners Ltd). BP 824 125, Nov. 25, 1959. Through BCIRA 40: 160 (1960). (1766)

The resistivity of polyacrylonitrile textile materials, and therefore their tendency to accumulate static charges, is considerably reduced by warming them with an alkaline solution of hydrogen peroxide.

DESIZING OF GLASS FIBERS. W. Kilby and W. A. S. White. BP 825 507, Dec. 16, 1959. Through BCIRA 40: 371 (1960). (1767)

Glass fiber materials in which the yarns contain sizes (resins, gums, starches, emulsified oils) are desized by a brief solvent extraction with hot trichloro- or perchloro-ethylene followed by flashing-off with hot water.

WASH AND WEAR FINISH FOR VISCOSE. W. G. Cameron and H. B. Mann (to Courtaulds Ltd). BP 825 608, Dec. 16, 1959. Through BCIRA 40: 379 (1960). (1768)

A minimum iron finish on viscose fabrics is produced by impregnating the fabric with caustic soda (not less than 50 g/l) for not more than 10 sec, mangling, washing, drying and giving a crease-resist finish. The concentration of caustic soda, and time and temperature are adjusted (e.g. by adding an electrolyte) so that the liquor held after mangling is 150-175 g, calculated on the basis of 100 g of oven-dry cellulose.

METAL COATED GLASS FIBER. J. A. Grant (to Owens-Corning Fiberglas Corp.). USP 2 915 806, Dec. 8, 1959. (1769)

The abrasion resistance and flexural resistance of glass fiber yarns and fabrics are increased by twisting together fibers coated with dissimilar but compatible metals which are complementary in their physical properties.

APPARATUS FOR THE TREATMENT OF PRODUCTS OF FIBROUS MATERIAL. W. Marty (to Maschinenfabrik Benninger AG). USP 2 918 813, Dec. 29, 1959. (1770)

Apparatus for liquid or gaseous treatment of spread fabric (or of warp yarns or skeins). The fabric is guided through the apparatus. Flanges agitate the treating medium and oscillate the fabric.

STABILIZED POLYESTER FIBERS. D. I. Randall (to Gen. Aniline & Film Corp.). USP 2 920 978, Jan. 12, 1960. (1771)

Polyester fibers resistant to photochemical degradation are obtained by treatment with 2,2'-dihydroxy-4,4'-dialkoxy benzophenone as the ultraviolet light absorbing compound.

METHOD OF RENDERING WOOL UNSHRINKABLE AND NON-FELTING. M. Levin (to Israel, Min. Agri.). USP 2 923 596, Feb. 2, 1960. (1772)

The wool cloth or yarn is immersed in an aqueous solution of acid bromate until the disappearance from the solution of bromate ion in the amount of 1.3 to 2.1% by weight of air-dry wool.

CREASE RESISTANT CYANOETHYLATED COTTON FABRIC. T. F. Cooke, J. W. Eastes, and L. A. Fluck (to Am. Cyanamid Co.). USP 2 923 597, Feb. 2, 1960. (1773)

Creaseproof fabrics with improved tear resistance are obtained by treatment of cyanoethylated cotton fabric with methylol melamine resins.

WASH-RESISTANT WATERPROOFING COMPOSITION. J. B. Rust and W. B. Canfield. USP 2 923 698, Feb. 2, 1960. (1774)

The composition is prepared by reacting a higher fatty acid amide with formaldehyde, reacting the product with a secondary amine to produce a tertiary amine reaction product, and converting the latter into a water dispersible non-quaternary tertiary amine salt.

INCREASING THE FLUFFINESS OF LAND FOWL FEATHERS. V. Z. Pasternak (to U.S. Secy. Army). USP 2 925 315, Feb. 16, 1960. (1775)

Land fowl feathers with increased fluffiness and filling power are produced by treatment with acrolein.

WETTING AGENTS FOR ALKALINE TEXTILE TREATING BATHS. K. Hofer (to Saul & Co.). USP 2 925 316, Feb. 16, 1960. (1776)

Wetting agents suitable for mercerization or the alkalization of cellulose and regenerated cellulose are prepared by the action of alkali metal sulfites on halogen hydrins of monoalkyl ethers of glycerol or their corresponding epoxides.

SHRINKPROOFING WOOL. J. E. Moore and C. E. Pardo, Jr. (to U.S. Secy. Agri.). USP 2 925 317, Feb. 16, 1960. (1777)

The wool is impregnated with an aqueous alkaline solution of a preformed polyalkyleneimine at a pH of 9 to 11 and cured at 75 to 150° C.

METHOD OF FULLING AND SCOURING WOOL. K. S. La Fleur (to Deering Milliken Research Corp.). USP 2 925 639, Feb. 23, 1960. (1778)

Wool piece goods laden with wool oil and carbonizing acid are milled while wet with an aqueous fullscouring agent composed of a hydrophilic detergent and a lipophilic wool plasticizer. The number of finishing operations is reduced and subsequent level dyeing is improved.

INCREASING FILLING POWER, ETC., OF LAND FOWL FEATHERS. V. Z. Pasternak and R. M. Lollar (to U.S. Secy. Army). USP 2 926 061, Feb. 23, 1960. (1779)

Land fowl feathers with increased fluffiness and water repellency are produced by treatment with aqueous alkaline solution of zirconium sulfate.

ANTIVESICANT FABRIC. A. E. Hill (to U.S. Secy. War). USP 2 926 107, Feb. 23, 1960. (1780)

The fabric is impregnated with a stabilized chloramine of a carboxy acid, e.g. 2,4,6-trichlorphenyl benzoyl or acetyl chloramine.

Dyeing and printing D2

CONTINUOUS AZO DYEING OF CELLULOSIC FABRICS. Ciba Ltd. BP 817 864, Aug. 6, 1959. Summary in BCIRA 40: 796 (1960). (1781)

DYEING ACRYLIC FIBERS. Farbenfabriken Bayer AG. BP 822 961, Nov. 4, 1959. Through BCIRA 39: 4825 (1959). (1782)

Acrylonitrile polymers are colored with azo or anthraquinone dyes that are devoid of sulfonic or carboxylic groups but contain at least one guanidyl or biguanidyl radical attached to the aromatic nucleus.

PRESSURE DYEING VESSELS. R. Ludwig (to Konrad Peter AG). BP 823 022, Nov. 4, 1959. Through BCIRA 39: 4826 (1959). (1783)

The invention relates to a pressure sealing device, comprising a pair of rollers and associated spring urged rubber plates, through which cloth can be fed into a pressure dyeing vessel.

DYEING CELLULOSE TRIACETATE. D. Finlayson, H. C. Olpin, B. Krzesinski, and J. A. Bright (to Brit. Celanese Ltd). BP 823 062, Nov. 4, 1959. Through BCIRA 39: 4822 (1959). (1784)

Cellulose triacetate is impregnated with an aqueous solution of caprolactam, which may be added to the dyebath, and thus rendered receptive to disperse dyes. The caprolactam may be applied locally, for printing.

DYEING CELLULOSIC TEXTILES. R. R. Davies, R. Price, I. D. Rattee, W. E. Stephen, and J. Wardleworth (to Imp. Chem. Inds. Ltd). BP 823 098, Nov. 4, 1959. Through BCIRA 39: 4821 (1959). (1785)

Wool dyes containing sulfon-β-halogenoethylamido groups are applied in the presence of an acid-binding agent.

IMPROVING THE WASHFASTNESS PROPERTIES OF DIRECT DYEINGS. Ciba Ltd. BP 823 405, Nov. 11, 1959. Through BCIRA 40: 163 (1960). (1786)

Dyeings with metalized direct dyes (Co, Ni, Cu) on cellulosic materials are rendered fast to wet treatments by an aftertreatment with an alkylenediamine containing hydroxyalkyl groups, particularly the compound $C_2H_4(NH \cdot C_2H_4 \cdot OH)_2$, or with a condensation product such as that between an aliphatic amine, dicyandiamide and formaldehyde, especially in the presence of pyrophosphate ions. The aftertreatment may be combined with further metallization, e.g. with cupric chloride. Details are covered by 17 claims.

PRINTING CELLULOSIC TEXTILE MATERIALS. W. Clarke and D. K. Lawman (to Imp. Chem. Inds. Ltd). BP 824 120 and 824 121, Nov. 25, 1959. Through BCIRA 40: 168 (1960). (1787)

Cellulosic materials are printed without the use of steam by means of an anthraquinonoid or an azo or polyazo dye that (in both cases) contains at least once an amino group that carries as N-substituent a 1:3:5-triazine radical containing at least one halogen atom attached to a C atom of the triazine ring. The printed material is then immersed in an acid-binding agent, dried, and washed.

DYEING PROCESS FOR CELLULOSE ACETATE RAYON, CELLULOSE TRIACETATE, AND NYLON. J. G. Kennedy (to Whiffen & Sons Ltd). BP 823 446, Nov. 11, 1959. Through BCIRA 40: 164 (1960). (1788)

The fabric is dyed with a diazotizable dye which is then diazotized and coupled with phloroglucinol in a buffer solution of acetic acid and sodium acetate.

DYEING POLYESTER FIBERS. Farbwerke Hoechst AG. BP 824 269, Nov. 25, 1959. Through BCIRA 40: 167 (1960). (1789)

An aromatic ester of benzoic acid (e.g. phenyl or benzyl benzoate) is used as carrier in the dyeing of materials of the Terylene type with dispersed acetate or ice colors.

CENTRIFUGAL MACHINE FOR SPOT OR SPACE DYEING YARN. H. G. Miller, Jr. (to Hickory Dyeing & Winding Co.). USP 2 922 696, Jan. 26, 1960. (1790)

PRINTING OF CELLULOSE TRIACETATE. H. C. Olpin and S. Taylor (to Brit. Celanese Ltd). USP 2 923 593, Feb. 2, 1960. (1791)

The dye paste contains an ester of a polyhydric alcohol with a lower fatty acid (e.g. diethylene glycol or glycerol acetate, or triacetin) and, with advantage, zinc or ammonium thiocyanate. The printed material is steamed.

Drying, setting, conditioning D4

FABRICS COMPRISING YARNS OF A COPOLYMER OF ACRYLONITRILE AND VINYLIDENE CHLORIDE. J. W. Grebby, S. G. Hawtin, and J. Downing (to Brit. Celanese Ltd). BP 823 247, Nov. 11, 1959. Through BCIRA 40: 169 (1960). (1792)

These fabrics are stabilized in a desired form (pleats, knitwear, etc.) by the action of dry heat at 110-150° C or of hot water or wet steam at a temperature up to 115° C.

DRYING APPARATUS FOR TENTERING MACHINE. F. Sibel. USP 2 916 796, Dec. 15, 1959. (1793)

In a clip tentering machine, jet nozzles are mounted between the rails, close to the fabric, and are supported so that they may move in and out as the rails are adjusted toward or away from each other.

DRYER FOR FIBROUS MATERIAL. W. R. Marshall, Jr. (to Proctor & Schwartz, Inc.). USP 2 924 887, Feb. 16, 1960. (1794)

Dryer in which a high velocity fluid stream carrying the fibers is suddenly expanded in the dryer chamber to effect dispersion of the fibers in the gaseous stream.

STABILIZING POLYETHYLENE TEREPHTHALATE YARNS AT ELEVATED TEMPERATURES. M. J. Coplan, R. J. Coskren, and T. T. Constantine (to Fabric Research Labs.). USP 2 926 065, Feb. 23, 1960. (1795)

Polyethylene terephthalate yarns, e.g. Dacron, are made stable to shrinkage at elevated temperatures by heat tensioning followed by heat relaxing.

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